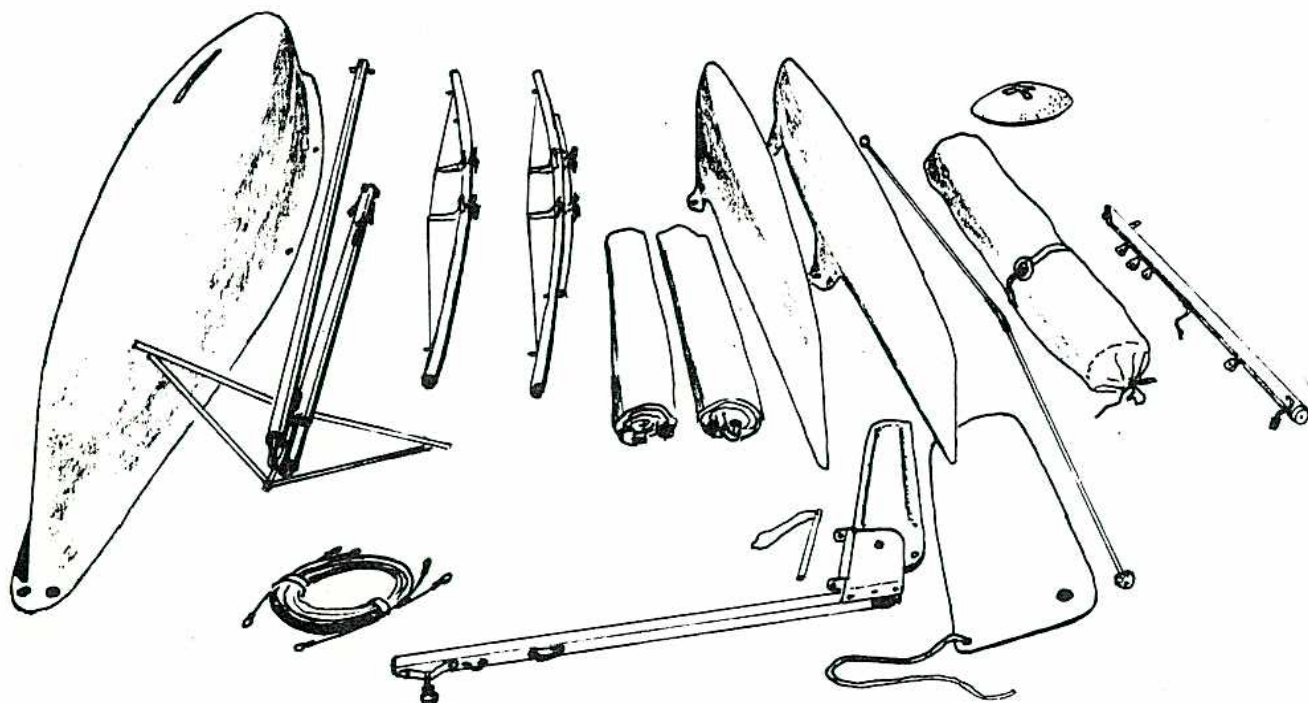
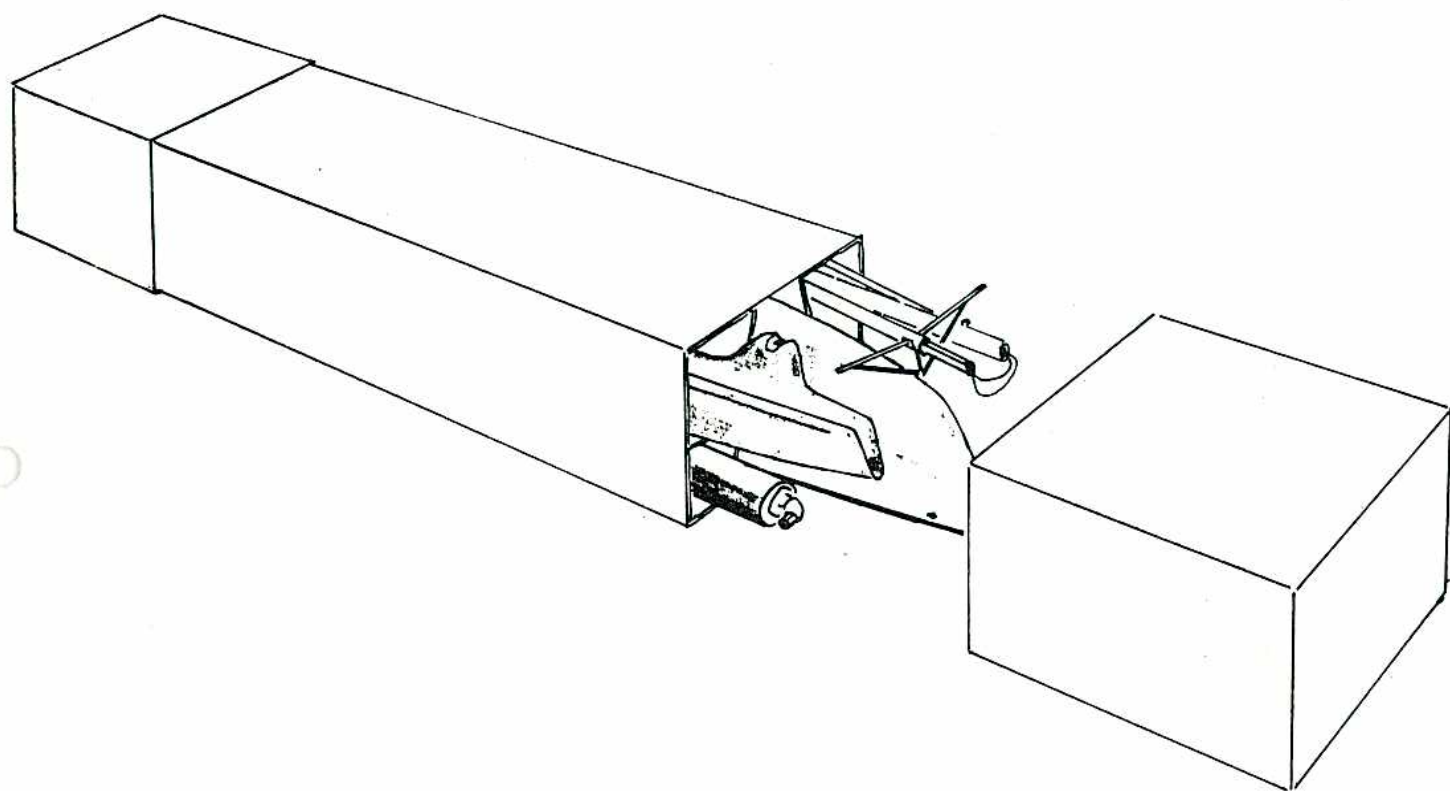
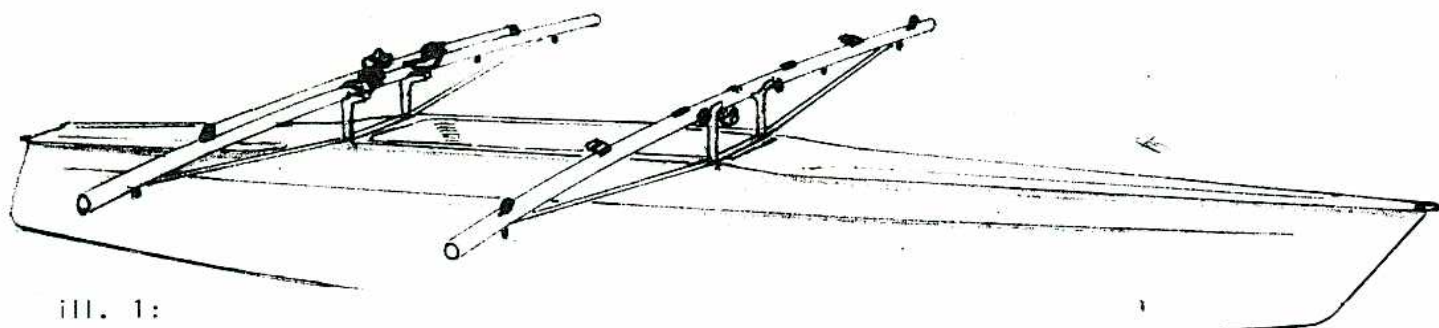


Manual

1. Assembly instruction.
2. Check before sailing.
3. Trimming.
4. Maintenance.
5. Spare part list.
6. Class-rules.
7. SUPERNOVA news.
8. Index.

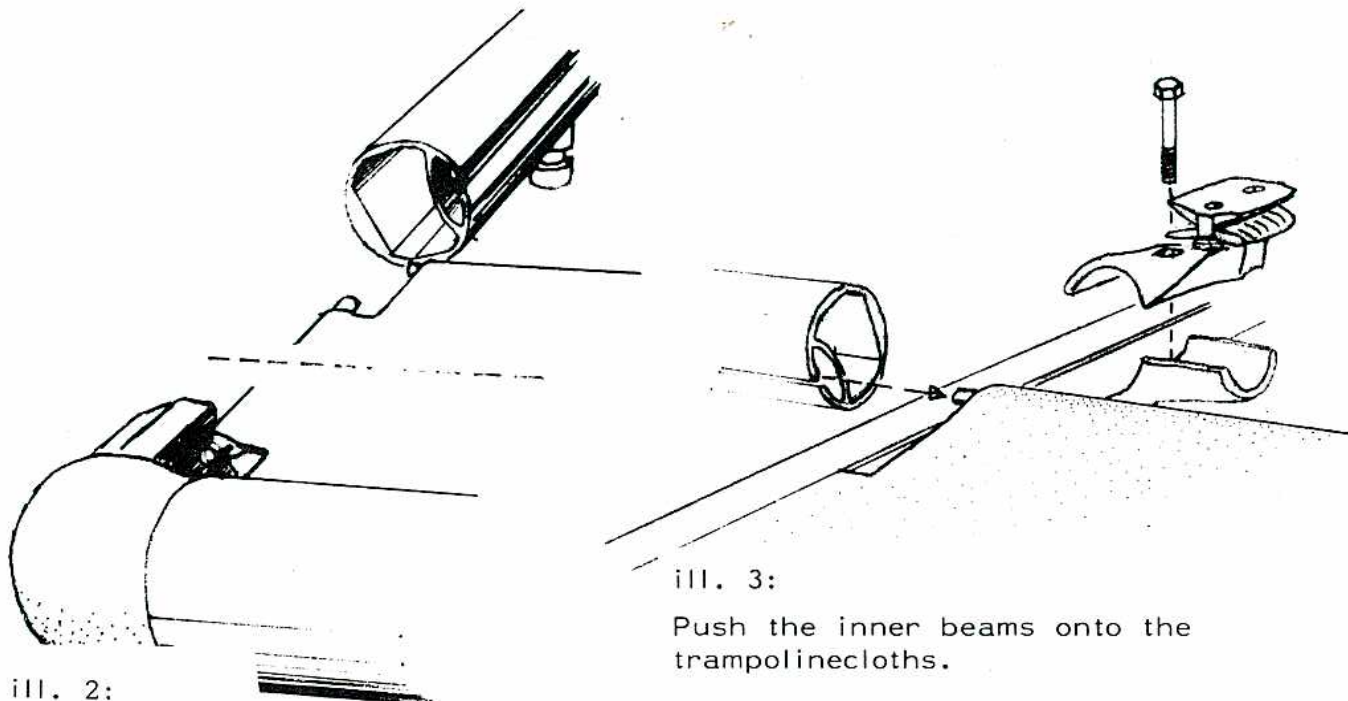
Assembly instruction





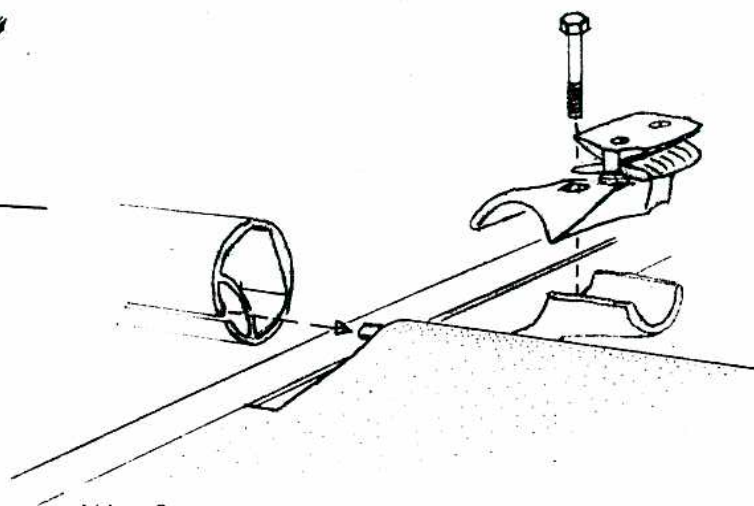
ill. 1:

The trampoline forward and aft beams are placed on the mainhull.



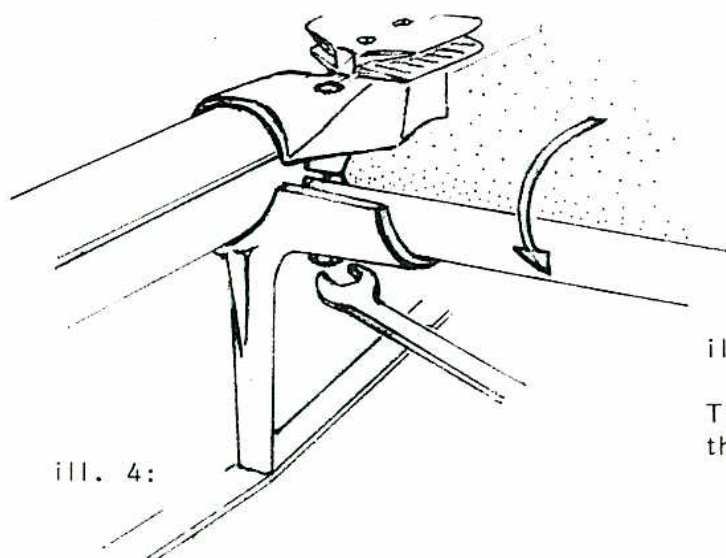
ill. 2:

Pull the trampolinecloth onto the beams, and join the outerbeams to the forward and aft beams.



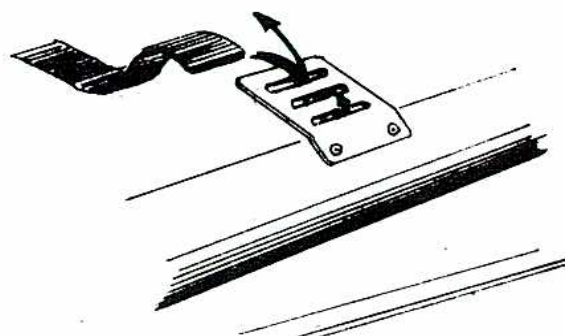
ill. 3:

Push the inner beams onto the trampolinecloths.



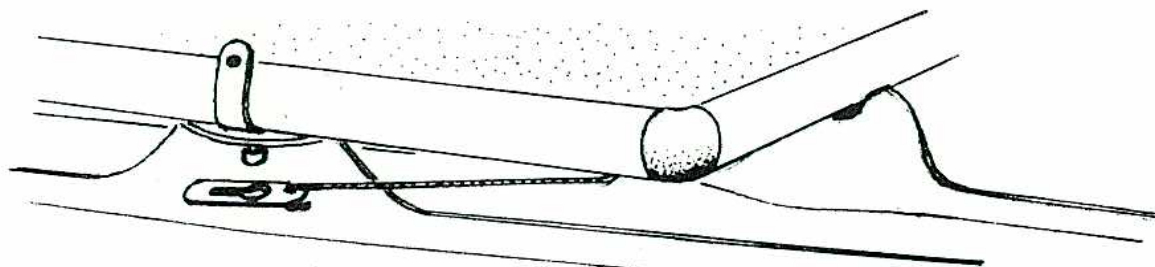
ill. 4:

Turn the inner beams to tighten the trampolinecloth, and secure by tightening the lock nuts.



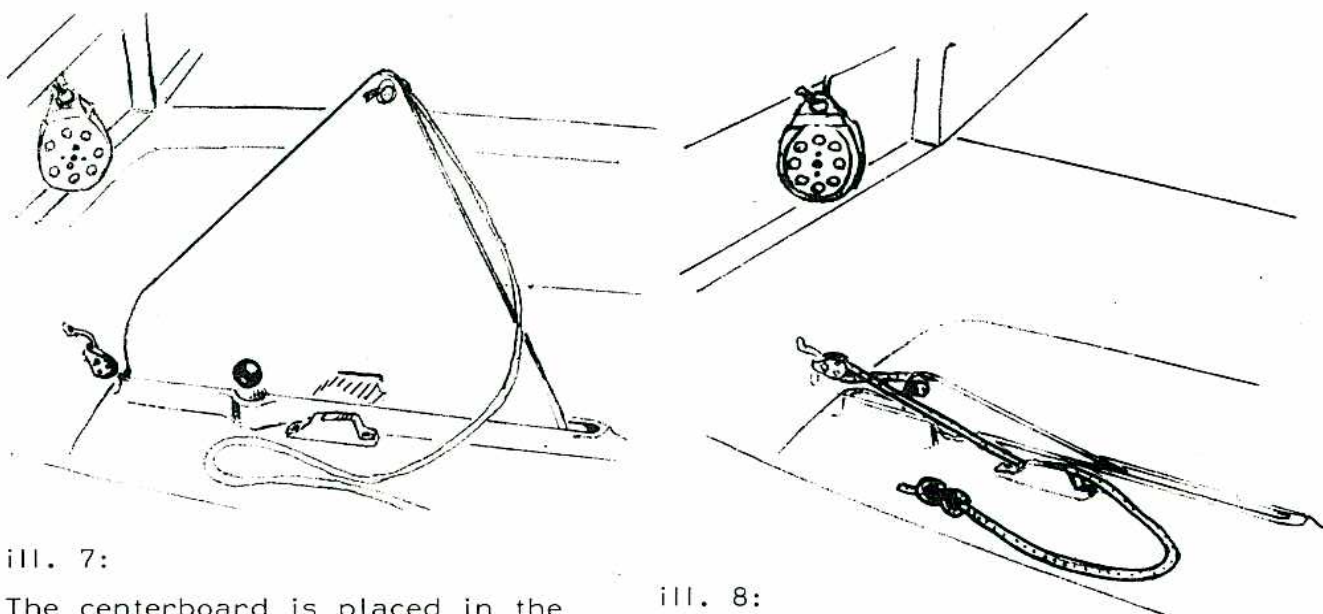
ill. 5:

The hikingstraps are mounted in the fittings on the forward beams.



ill. 6:

The keyhole fitting is slit onto the locknut.
(Here shown on starboard outrigger outer fastening).

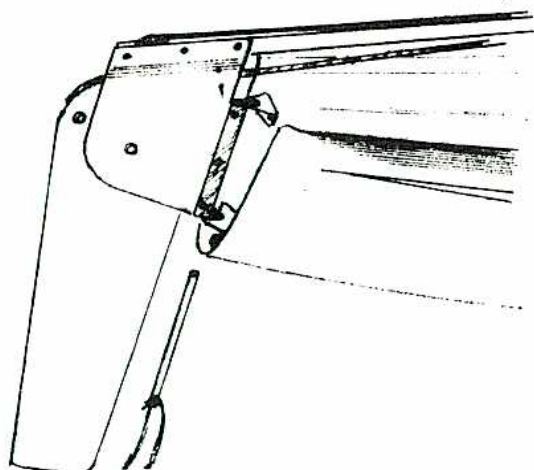


ill. 7:

The centerboard is placed in the
centerboardcase.

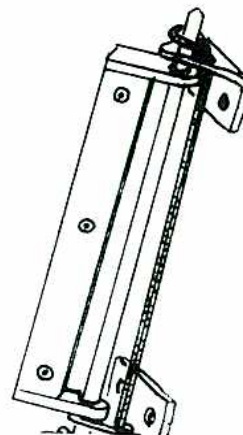
ill. 8:

The centerboard controlline is
lead through block and
clamcleat, a figure of eight knot
is tied on the end of the line.



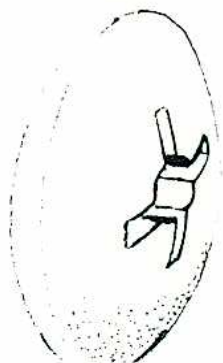
ill. 9:

The rudder is placed in the rudder-
fittings and the shaft is put
through from underneath.



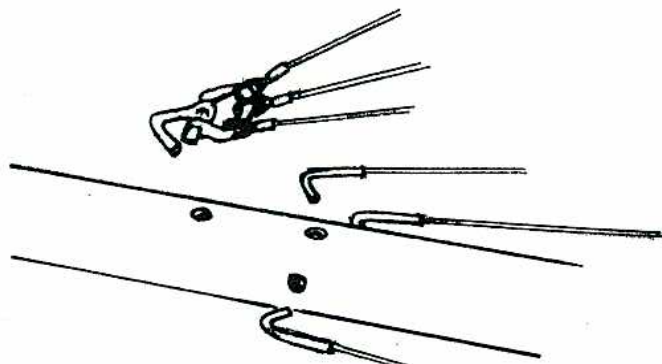
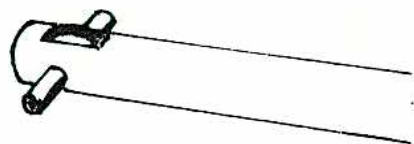
ill. 10:

The shockcord is lead through
the holes in the fittings and is
fixed over the end of the shaft.



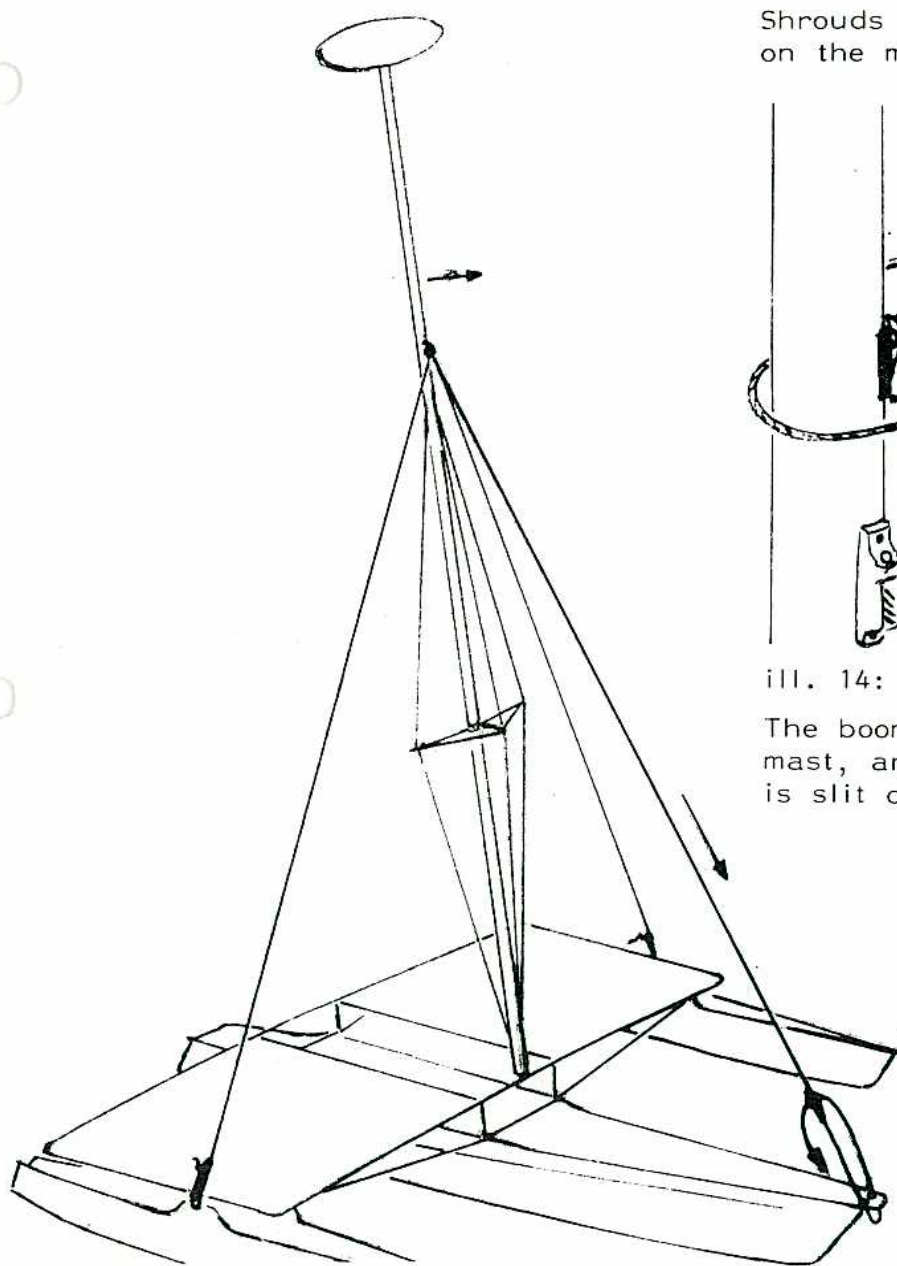
ill. 11:

The masthead float is mounted on the mast.



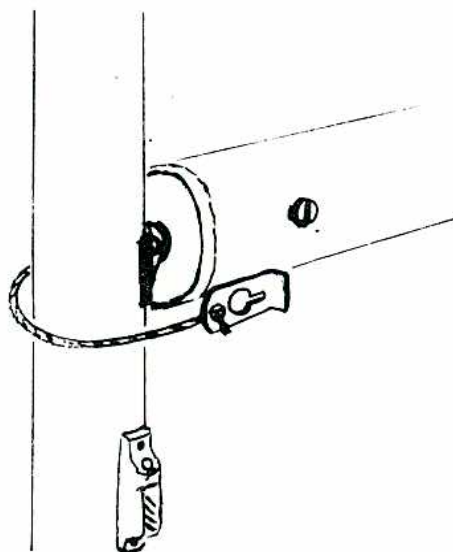
ill. 12:

Shrouds and fore stay is secured on the mast.



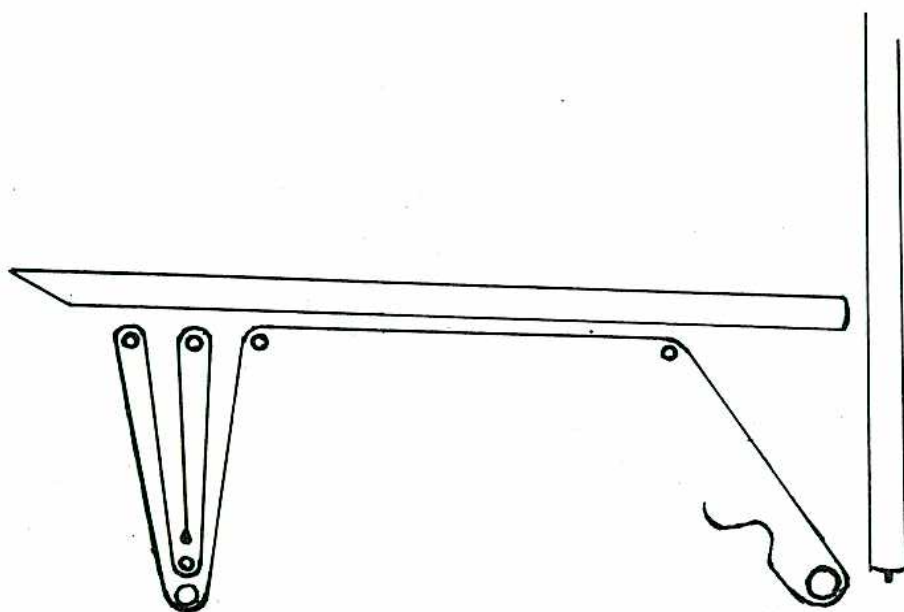
ill. 13:

The mast is raised, after having secured the sidestays.



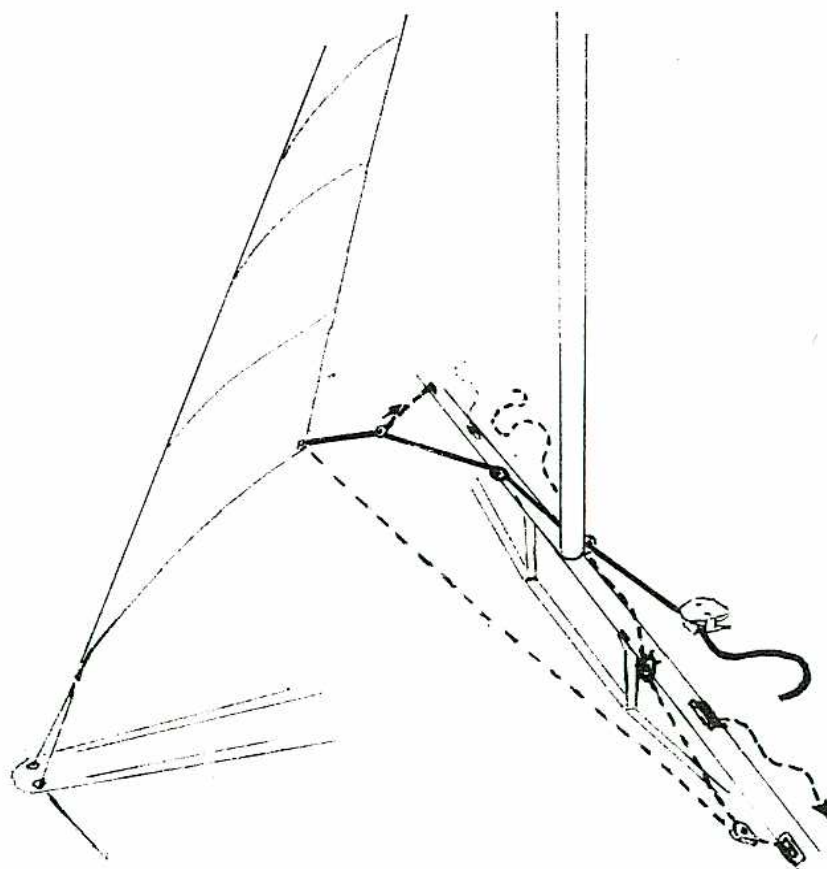
ill. 14:

The boom is mounted onto the mast, and the keyhole fitting is slit onto the locknut.



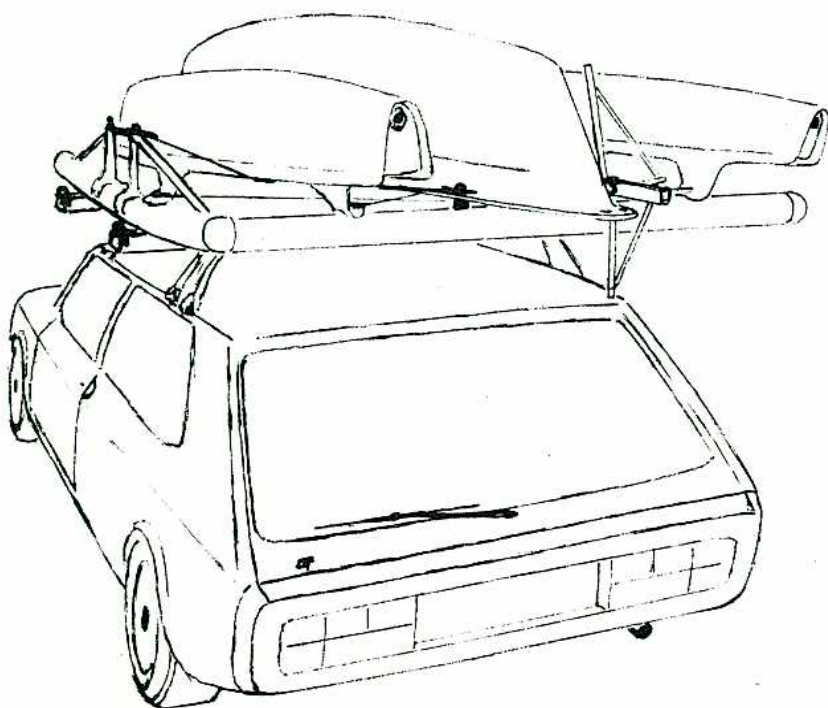
ill. 15 A:

The mainsheet is lead through the blocks.



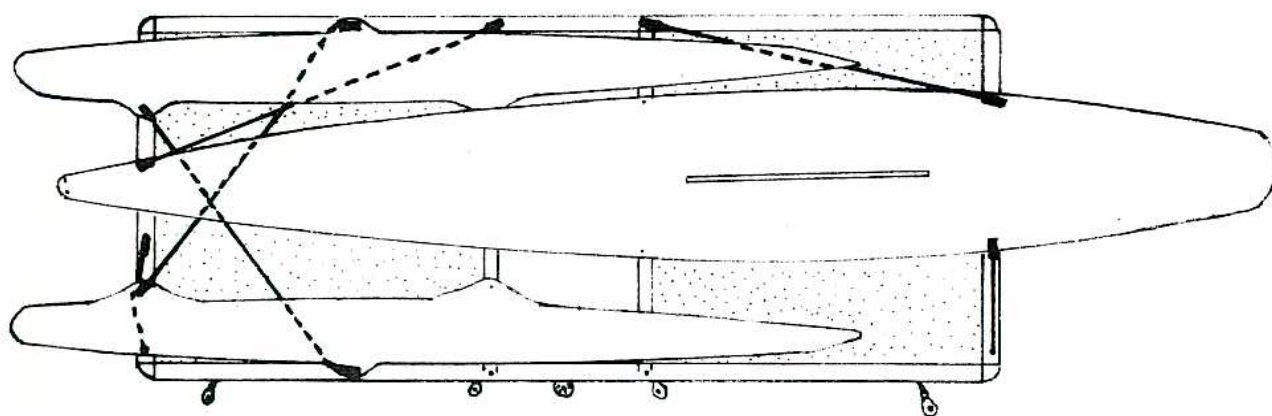
ill. 15 B:

The jibsheet is lead through the barberhaul block.



ill. 16:

Boat cartopped.



ill. 17:

The locations of the keyhole fittings during transport.

Check before sailing

Before you go sailing you should check following:

1. Check that all hulls are undamaged.
2. When you place the centerboard in the case, it is important to remember to tie a knot in the end of the centerboard controlline, when lead through the block and cleat.
3. Check that the trampolinedcloths are tightened, and the inner longitudinal beams are locked properly by the bolt joining strut and beam.
4. Check that all locking bolts are tightened.
5. Check that all keyhole fittings lock properly, and that the chock-cords are undamaged.
6. Check that all three drainplugs are screwed in properly, and eventually that inspectioncovers are closed watertight.
7. Check that the cockcord on the ruddershaft is not damaged.
8. Check that the rudderblade pivots easily, when the rudder is in place.
9. Check that the rigging adjustment lines are not damaged, and that they are tied properly.
10. Before you raise the mast you should check that the mastheadfloat has a tight fit to the masthead.
In case not, do increase the diameter of the masthead with waterproof tape, until a tight fit is obtained.
11. Check that the diamond strut sidestays are very tight, and the diamond strut forestay is locked.
12. The rigging shall be tightened to the degree where the mast bends slightly aft on the middle, before the sails are set.

Trimming

1. Broad reach:

The sails are sheeted all out and little bit loose to make them full.

The crew is forward in the light weather condition moving aft with increasing wind-strength.

Note the SUPERNova doesn't go faster than the wind. Downwind it's more efficient to broad reach (tacking downwind)

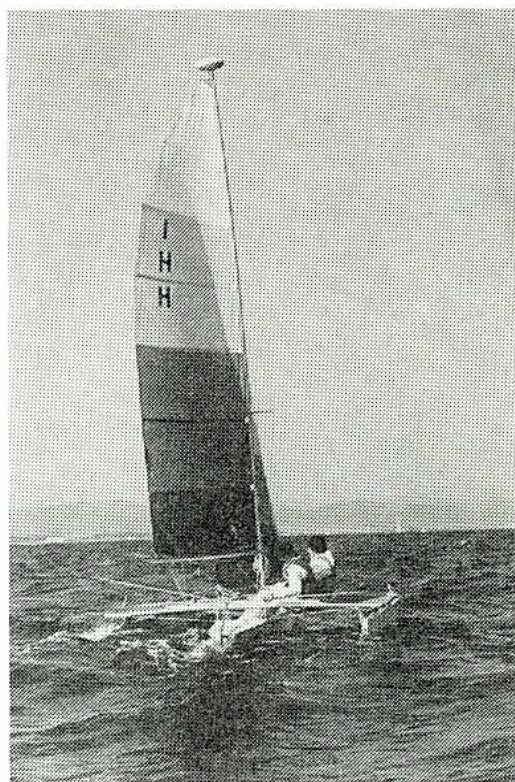


Broad reach.

2. Beam reach:

Light weather condition. The sails are hollowed, and are sheeted further out than when closehauled.

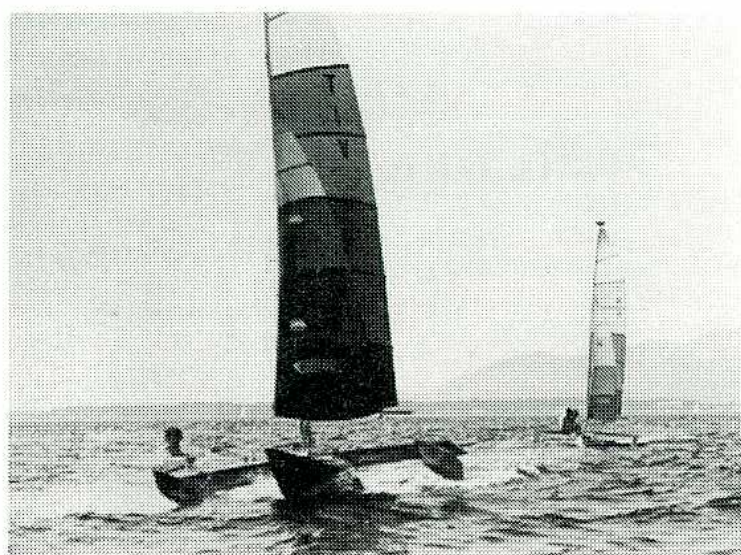
The crew is forward in the boat.



Beam reach.

Medium weather conditions.

When the wind is increasing, crew is to move further aft and to windward to avoid speed-reduction and capsizing. Sails are flattened.



Beam reach.

3. Close hauled:

In light weather:

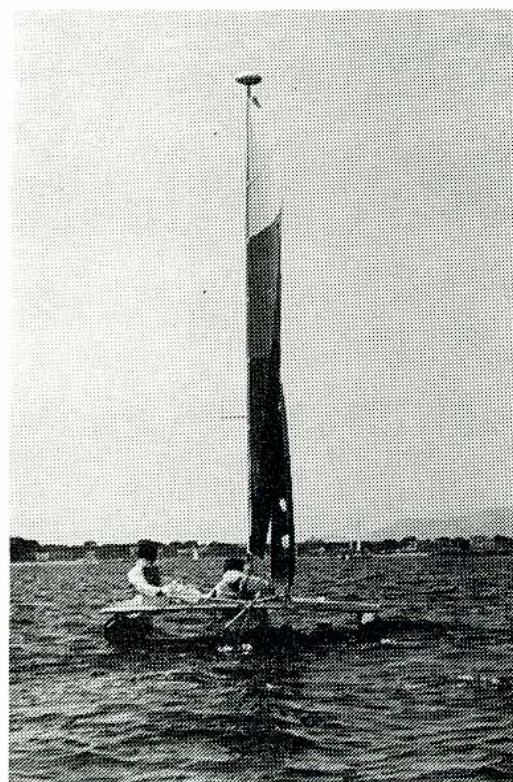
The SUPERNOVA shall be balanced athwartship with the lee outrigger just touching the surface of the water. Longitudinally the crew shall be forward to the extent that the bows of the outriggers are not totally submerged.

Trim:

The cunningham shall be pulled quite hard. Also operate the out-haul on the boom to obtain a flatter mainsail.

Note that the mainsail-sheet shall be a little loose to obtain twist in top of the sail.

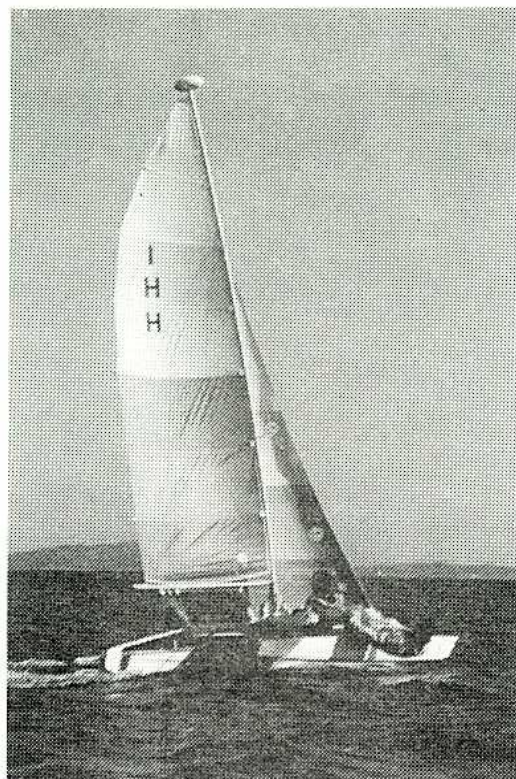
In heavier conditions, the mainsail must be even flatter, otherwise the windpressure becomes too hard and you cannot balance the boat correctly.



Close hauled.

With increasing wind-strength ease the traveller against leeward. In medium wind positioned app. 15 - 25 cm. (6-10") from the center.

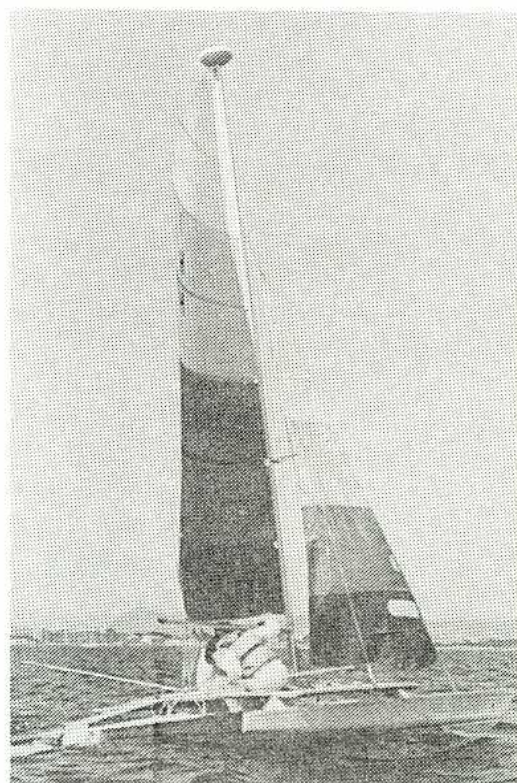
In light conditions the jib shall be sheeted without using of the barberhauls. With increasing windstrength pull the barberhauls up to about 10 - 15 cm. (5-7") to flatten and open the jib.



Close hauled.

4. Gybing:

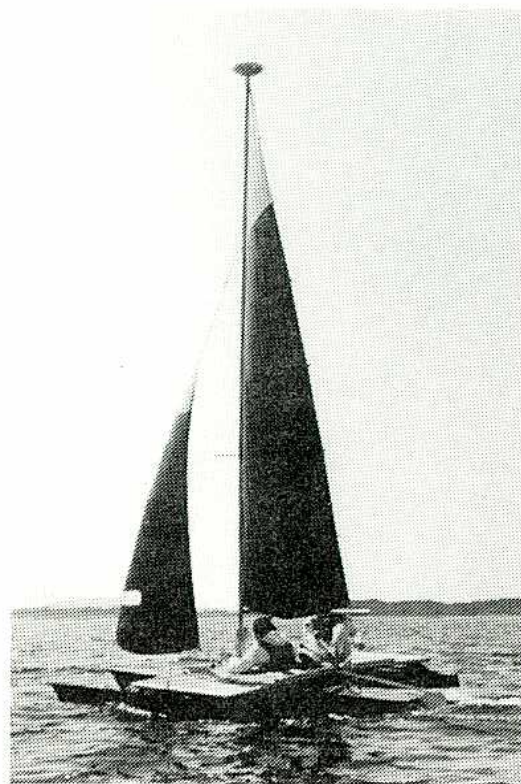
When gybing in light and medium conditions, the helmsman transfers the boom with his hand. The crew changes position to opposite side.



Gybing.

5. Tacking:

When sailing close hauled on one tack, tacking can begin.
The balance must be perfect.

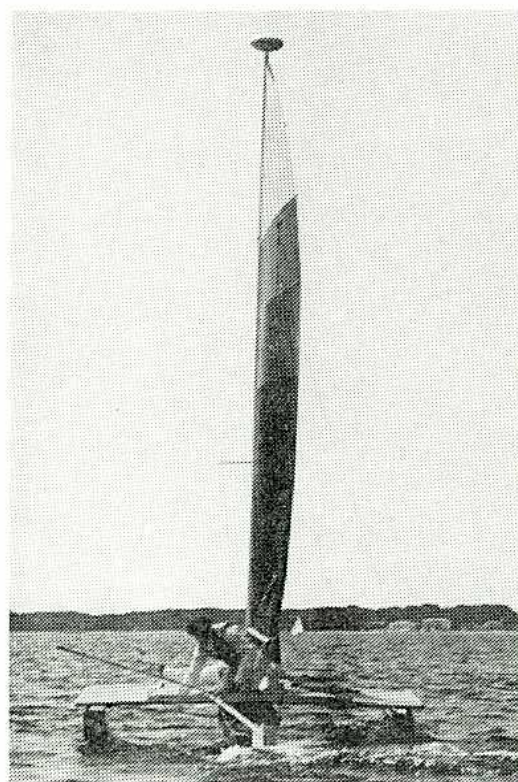


Tacking.

The crew holds sheets in their hands, the helmsman give rudder to lee.

Note that the boat has to be balanced very carefully, to avoid that the outriggers are submerged and brakes the tack.

Passing through the wind, back the jib for a moment, then ease the mainsheet and let the jibsheet go.

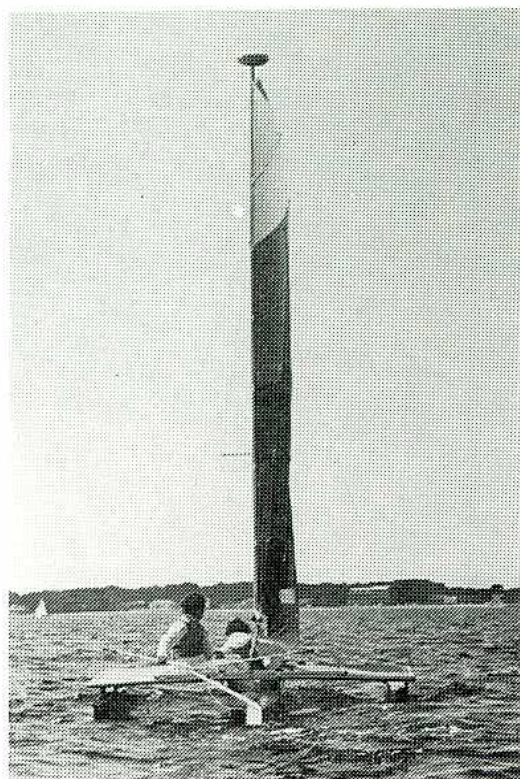


Tacking.

Sheet the jib on the new tack.

The helmsmann still give rudder untill being on new close hauled course - check f.ex. telltales.

Note that the SUPERNOVA still is balanced completely horizontal.



Tacking.

When the boat is gaining speed, pull the main-sheet in and adjust the jib more carefully.

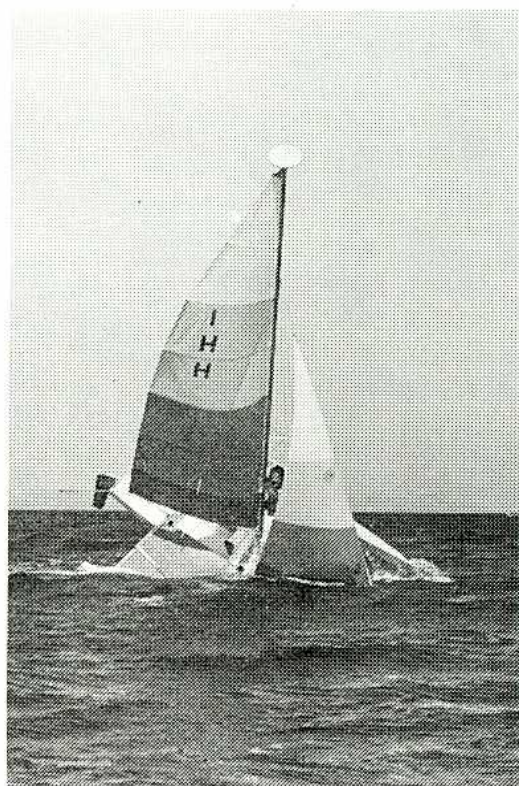


Tacking. 19.

6. Forward capsize:

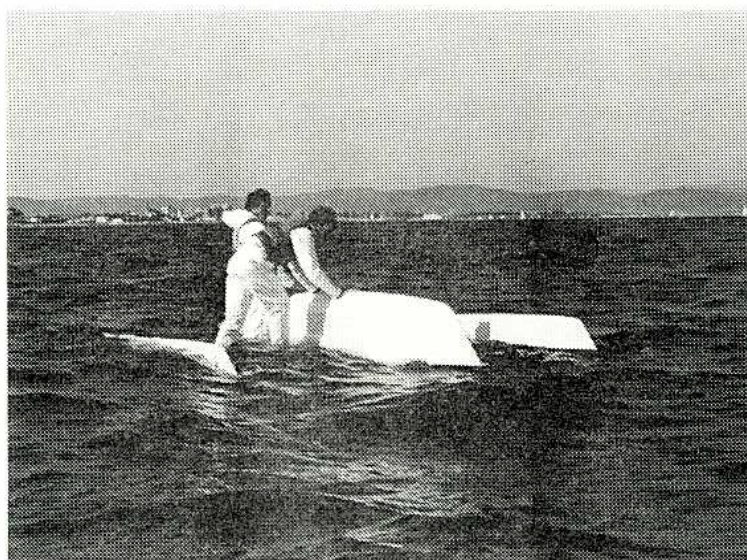
The bowes are diving because of the crew being too much forward or to much windpressure on sails.

To avoid the latter, ease sheets or point higher/lower.



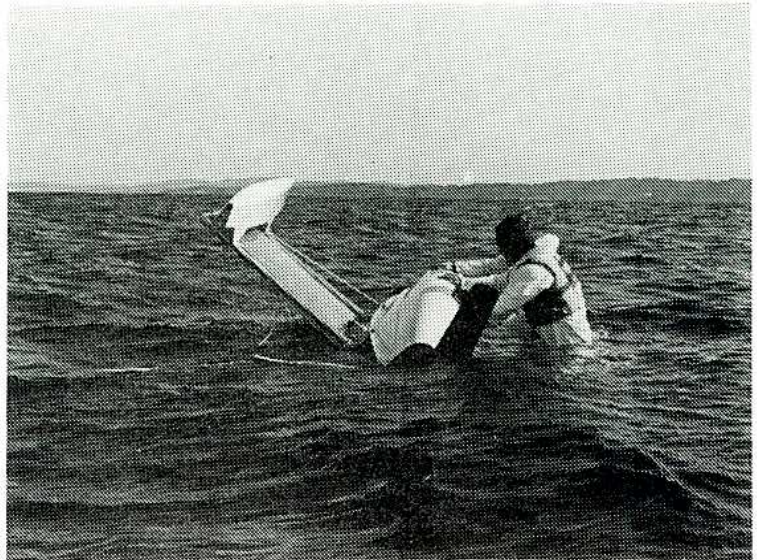
Forward capsize.

Result of forward capsize.



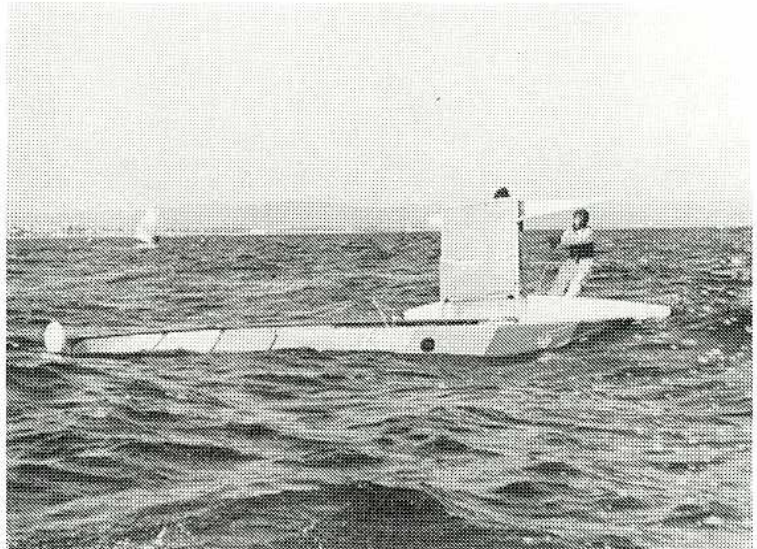
Forward capsize.

The crew is standing on one outrigger, and the SUPERNOVA is now rising slowly.



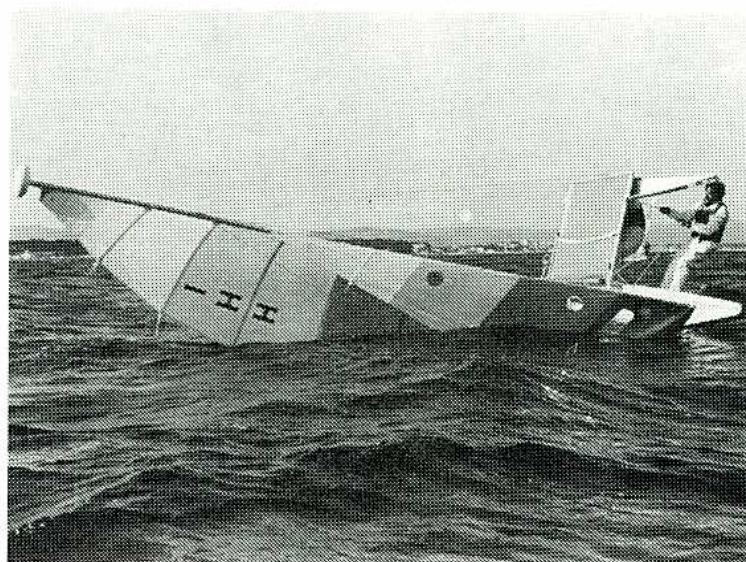
Forward capsize.

The SUPERNOVA is now in normal capsize position. Note one crewmember is leaning out holding a line f.ex. the barber-haul.



Forward capsize.

From this point the SUPERNova is righted exactly like from a normal capsize.



Forward capsize.

7. Normal capsize:

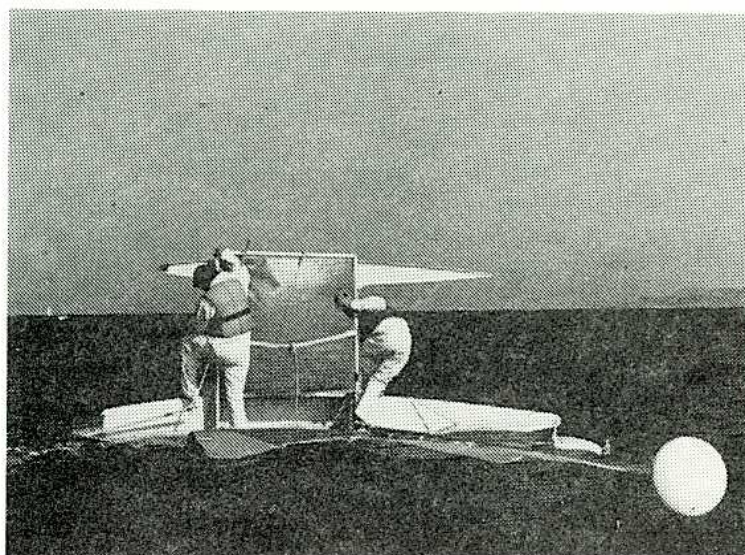
Leeward outrigger is well submerged caused by too high heeling force.

The crew should have been positioned further to windward, eventually hiking out, or the sail pressure should have been reduced by easing the sheets.



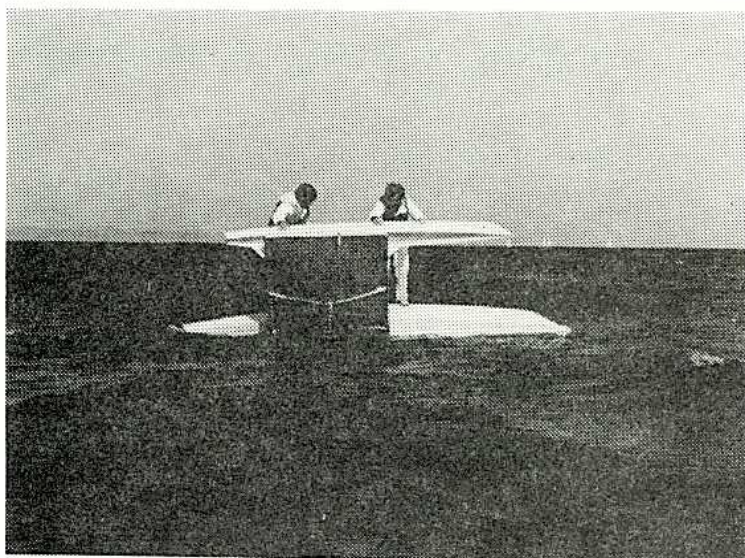
Normal capsize..

The crew didn't avoid the capsize in time.
 The SUPERNOVA is now balanced on the masthead float.
 The crew is on the way to the other side of the trampoline.



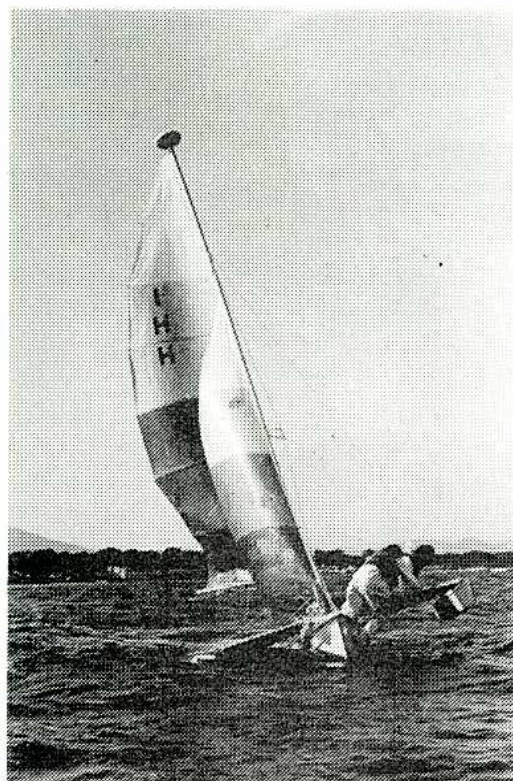
Normal capsize.

The crew is now positioned ready to right the SUPERNOVA.
 Lean out, perhaps with help of a line and the SUPERNOVA is easily righted.
 Remember to uncleat sheets.



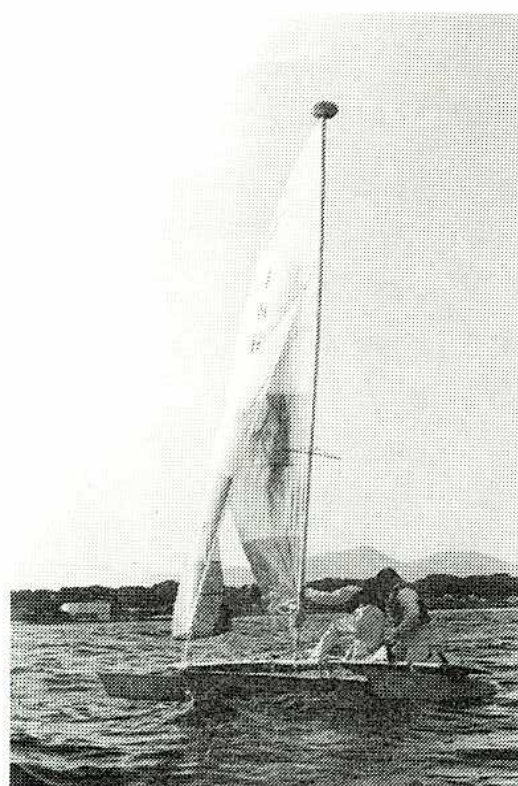
Normal capsize.

The SUPERNOVA is on it's way up and the crew is moving onto the trampoline.



Normal capsizes.

The righting is now completed, and after a bit tidying the lines you continue sailing. Note how the crew are moving to change side.



Normal capsizes.

Maintenance

Though yours SUPERNOVA is build of the best materials, your SUPERNOVA is not totally carefree.

To make sure that your SUPERNOVA will last as long as possible, you have to do following maintenance.

Hulls:

Clean hulls regularly with detergent, for instance ammonia-solution, oil and tar can be removed with acetone.

Treat afterwards with costum marine polish.

Any damage to the hulls should be repaired shortly after the incidence. The SUPERNOVA hulls are laminated with isophatalic resin, gelcoat and top coat.

To ensure full strenghts repairs, you should take this in mind.

Mast and trampoline:

Clean regularly with detergent.

The aluminum surface is anodized with a aluminumoxide layer, a hard and durable surface.

To avoid cor-rosion we recommed that you polish the mast.

warning.

Do not clean the mastheadfloat and the trampoline cloth with solvents.

Rudder:

The rudder blade is varnished with a one pot white spirit based varnish, when recoating please use a simular varnish, if you are in doubt, try a little spot.

Running rigging:

All ropes may be cleaned with normal washing powder.

Sails:

The life time of your sails is dependent on how they are treated and used. Sails need to be checked and maintained regularly.

After sailing you should store both sails in the sailbag, rolled evenly to avoid wrinkles. Store the sails in a well ventilated room, preferably without sun, and with constant temperature.

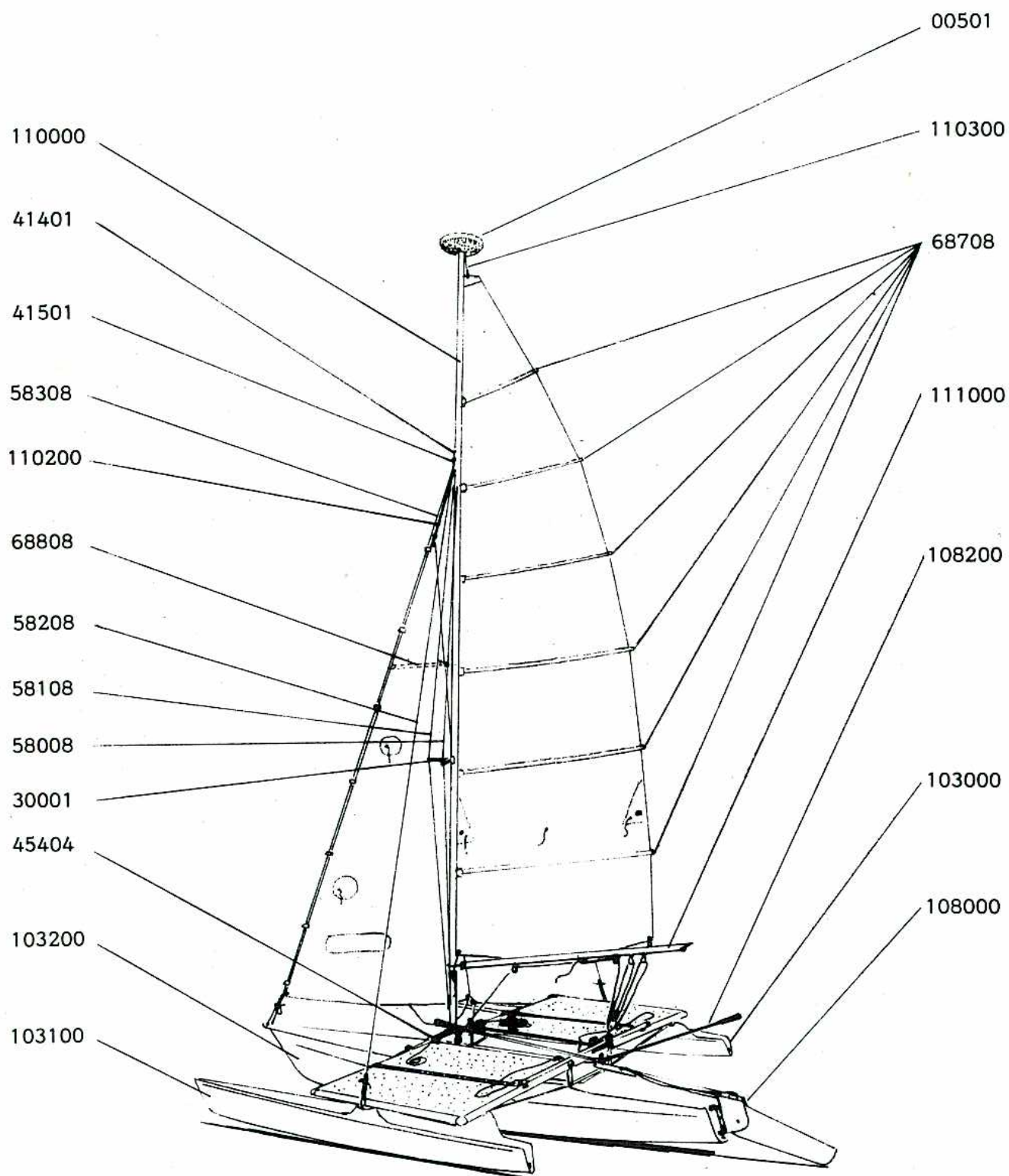
If the sails are wet or humid after sailing, and you are not going sailing the next two days, dry the sail to avoid mildew, before you put it away.

You may wash your sails in lukewarm water, and normal washing powder for synthetic textiles, the use of a soft brush makes the washing easier.

If the sails are very dirty you can soak them overnight.

Stains that cannot be removed with the above method, you should ask a skilled cleaner to do.

Spare part list



00501	Mastheadfloat
02000	Trampoline strut only
02100	Trampoline strut upper part
02205	Cornerfitting
03106	Ball for centerboard
20001	Shaft, mainsailhalyard sheave
27407	Rudderblade bearing
30001	Diamond strut
33002	Boom outhaul traveller
33102	Keyhole fitting for boom
34000	Locking bolt short
34105	Locking bolt long
37007	Neoprene sheave
37107	Tiller extension grip
37207	Rudderblade
40301	Bolt for riggingscrew (with ring)
40700	Vertical clamcleat closed
41201	Halyard shackle
41301	Mainsailhalyard sheave
41401	Hook for stays
41501	Shackle for hook
44503	Sisterblock for mainsheet
44603	Shackle for sisterblock
44703	Horizontal clamcleat stb. port
44803	Horizontal clamcleat stb. port
45104	Winchblock
45404	Double horizontal clamcleat
45604	Swivel for winchblock
47007	Clamcleat for tiller
47307	Nylon sheave for tiller extension
49009	Drainplug
49109	O-ring
58008	Diamond side stay
58108	Diamond forestay
58208	Shroud
58308	Forestay

50105	Trampolinecloth stb.
50205	Trampolinecloth port
68508	Mainsail excl. battens
68608	Jib
68708	Batten set for mainsail
68808	Batten for jib
98200	Bolt for trampoline assembly
98100	Nut for trampoline assembly
100000	2 keyholefittings with chockcord
101100	1st batten (from top) mainsail
101200	2nd batten
101300	3rd batten
101400	4th batten
101500	5th batten
101600	6th batten
103000	Outrigger stb. complete
103100	Outrigger port complete
103200	Main hull complete
105000	Center beam, trampoline
105100	Outerbeam stb. complete
105200	Outerbeam
107000	Centerboard complete
108000	Rudder complete
108100	Rudder head and tiller
108200	Tillerextension
108300	Top nut for tillerextension
110000	Mast, complete
110200	Jib halyard complete
110300	Mainsailhalyard complete
111000	Boom, complete
112000	Trampoline complete
112100	Aft trampoline beam, complete
113000	Forward trampoline beam, complete
113200	Barberhaul

Class-rules

1. General.

The SUPERNOVA is a one-design boat. Any alterations to the boat as supplied by the builder is prohibited.

2. Administrative.

2.1. The official language of the class is English, and in the event of dispute over interpretation the English text shall prevail.

2.2. Builder is H. P. Spangsberg & Son LTD (hereafter abbreviated HPS) or any manufacturer authorized by HPS.

2.3. The building fee is composed of:

- a) design fee paid by HPS to SPUNK BOATS ApS.
- b) administration fees paid by HPS to applicable administrations.
- c) authorized manufacturers to pay a) + b) + builder's fee and other applicable licences to HPS.

2.4. No boat will be allowed to race, unless it has two valid measurement certificates, both a boat certificate governing all matters pertaining the complete boat excluding sails, and a sails certificate.

Certificates are provided by HPS, or an authorized manufacturer, with the boat and sails.

Certificates are valid for the life of the boat/sail provided no changes or repair are made to boat/sail causing it not to comply with the class rules.

If any occurrence causing invalidation of a certificate, said certificate shall immediately be destroyed and recertification applied for through HPS or authorized manufacturer.

2.5. The complete boat shall be built with tooling supplied by HPS and shall be constructed in accordance with the specifications from HPS.

2.6. This is a strict one design class. The intention of the rules are that measurement certificates ensure this.

Measurement is initiated and effected during production, but before delivery of the individual boat by HPS or authorized manufacturer in compliance with appropriate nation-

nal and international organisations.

2.7. See 2.6.

2.8. Serial numbers shall be moulded into the mainhull and outriggers and stated in the boat certificate.

The SUPERNOVA sailnumbering code displayed on the mainsail shall be considered its class emblem, there shall be no national letter(s), but no two mainsails shall have identical numbers.

The sailnumber and the serial numbers on the mainsail and the jib shall be entered on the sail certificate.

3. Construction and measurement rules.

3.1. Hull.

3.1.1. Mainhull and outriggers shall be constructed of GRP.

No exotic materials are allowed.

3.1.2. All hulls and decks shall be constructed to comply with rule 2.5.

The weight of the bare assembled mainhull and deck with following fittings mounted:

- 2 rudder fittings
- 1 drainplug
- 7 stainless steel eye holes
- 1 cleat
- 1 centerboard adjustment block

shall not be less than 28,5 kg.

The weight of the bare assembled outrigger hulls and decks each fitted with following:

- 1 drain plug
- 3 stainless steel eye holes

shall not be less than 6,0 kg. each.

Hull and outrigger dimensions and shape shall be within the limits shown on the measurement diagram.

The mainhull, maindeck and both outrigger hulls and decks are marked with the mould and plug registration number.

- 3.1.3. It is permitted to fit not more than 2 inspection ports, each no larger than 130 mm. diameter, one each in the cockpit forward and aft bulk-head.

The ports shall have threaded covers (if bajonet type, fitted with O-rings).

Compass may be fitted.

- 3.1.4. Flanges joining hulls and decks shall not be less than the minimum given in the measurement diagram to ensure a strong joint.

The size of the flange is the distance measured at right angles from the sheer line to the edge of the flange.

Sheer line is defined as the intersection of the hull and deck planes extrapolated through the flange.

- 3.1.5.1. The trampoline consists of:

- 1 forward crossbeam
- 1 aft crossbeam
- 2 pairs of longitudinal beams

All beams shall be standard section mast profile as defined in 3.4.1.1.

- 3.1.5.2. Forward crossbeam.

The beam shall be permanently bent 50 ± 10 mm from straight.

The length of the beam shall be 3105 ± 5 mm. fitted with following:

- 2 struts cast aluminum assemblies
(tools supplied by HPS) upperpart fitted with double sided cleats.
- 1 tie of minimum 4 x 25 mm. square section aluminum with rounded corners.
- 2 jib barberhaul system
- 2 jib sheeting blocks
- 1 mast step reinforcement plate
- 5 lockbolts

- 1 winch block for mainsheeting
- 2 locking chainplates fitted on chock-cords
- 2 hiking strap adjustment fittings.

3.1.5.3. Aft crossbeam.

The aft crossbeam shall be permanently bent as the forward beam.

Length of beam as forward beam fitted with the following:

- 1 mainsail sheeting track fitted with two stops
- 2 40 \pm 5 mm. wide webbing attached as hiking strap
- 1 mainsail traveller with adjustment line and main sheet block
- 2 struts, cast aluminum assemblies, upper parts fitted with single cleats
- 1 tie as frontbeam.

3.1.5.4. Longitudinal beams.

- 2 outer beams length 1250 \pm 2mm. fitted with 1 lockbolt each plus devices for fastening hulls to trampoline, when it functions as roofrack.
- 2 inner beams, length 1216 \pm 2 mm. without fittings.

The trampoline cloths shall be heavy reinforced cloth of PVC or similar, no netting is allowed, but a maximum of 10 drainholes of a diameter not larger than 26 mm. are permitted.

3.1.6. No fittings except for those mentioned in this rule are permitted. If it is indicated that any fitting has been moved from its original position, recertification shall take place by checking against original tools.

3.1.7. It is the owners responsibility to ensure, that the three hulls are watertight.

Watertight is defined as maximum 1 L intrusion of water per hour.

No other boyancy aid is mandatory, but it is permitted to install airbags in the mainhull.

3.1.8. The weight of the mainhull and outriggers attached to the complete assembled trampoline is not to be less than 63,5 kg.

3.1.9. No treatment may be applied to the hulls of a boat for the intended purpose of improving its performance, but nothing shall prohibit the repainting of a hull which requires refinishing.

3.2. Centreboard.

3.2.1. The centreboard (CB) is to be fabricated from 6 mm. aluminium sheet.

3.2.2. The shape is defined by templates supplied by HPS. The shape shall not vary more than ± 5 mm. The CB may not be shaped inside of 10 mm from the edges.

3.3. Rudder and Tiller.

3.3.1. The tiller and rudderhead shall only be supplied by the builder and shall be of aluminium and stainless steel.

3.3.2. The rudderblade shall be of wood or other material approved by HPS.

The rudderblade shall cover the area described in the measurement instructions completely.

The rudderblade shall have a minimum thickness of 18 mm. along a continuous line in its whole length except for the area up to 100 mm. from the tip.

The rudder shall be fitted with downhaul, fixed rudderblade is not permitted.

3.3.3. Tiller extension is free but shall not weigh less than 0,700 kg.

3.4. Spars.

3.4.1. Mast.

3.4.1.1. The mast is a constant section aluminium extrusion.

External periferi is circular, but with an internal sail track.

The outer diameter is 50 ± 1 mm.

The internal periferi and tolerances as per HPS specifications.

The weight of the section is

$1,14 \pm 0,05$ kg./m.

3.4.1.2. The mast may be in one or two parts.

The total lenght of the mast extrusion is 6500 ± 10 mm.

3.4.1.3. When assembled the mast is fitted with the following:

- 1 main halyard sheave on a shaft functioning as masthead float locator.
- 1 masthead float.
- 1 jib halyard sheave box.
- 3 stays with rigging screws, forward stay also with quick release tensioner. Stays to be minimum diameter 2,5 mm. stainless steel wire.
- 1 diamond strut.
- 1 gooseneck with cummingham eye
- 1 cummingham cleat.
- 2 halyard cleats.
- 1 maststep.
- 2 shrouds, minimum diameter 2,5 mm. stainless steel wire
- 1 forestay minimum diameter 2,5 mm. stainless steel wire.
- 1 shackle.
- 1 hook.

3.4.1.4. The minimum weight of the assembled mast is 10 kg. including mainsail and jibhalyard and all items described in 3.4.1.3.

The restriction in 3.1.6. applies.

3.4.2. Boom.

3.4.2.1. The boom is an aluminum extrusion.

3.4.2.2. The boom section is a constant section circular tube with outer diameter 50 \pm 2 mm., and wall thickness minimum 1,5 mm. length 1850 \pm 50 mm.

3.4.2.3. The boom is fitted with:

- 1 gooseneck
- 1 integral outhaul system with chockcord and boom locking device.
- 1 outhaul cleat.
- 4 mainsheet blocks.

The restriction in 3.1.6. applies.

3.5. Sails.

3.5.1. The rig shall consist of mainsail and jib.

The boat may be raced with the main reefed and/or without the jib.

A race committee may declare shortening of sail(s) mandatory.

The IYRU sail measurement instructions 1974 shall apply where no conflict with these rules arises.

3.5.2. The mainsail shall carry identification in the form of SUPERNOVA numbering code silk screened back to back on both sides of the sail by the manufacturer.

The individually signs to be clearly readable and the height not less than 220 mm.

The code consists of symetrical signs as follows:

0 = 0	5 = V
1 = 1	6 = X
2 = T	7 = Y
3 = M	8 = 8
4 = H	9 = A

- 3.5.3. The mainsail shall be measured in compliance with the sail drawing in the rule.
The mainsail shall have a maximum of 7 constant section battens.
Battens shall not exceed the length of the pocket plus 50 mm.
The headboard must not exceed 170 mm. including luffrope measured perpendicularly to the luff.
The mainsail shall be supplied with one slapreef only, consisting of 2 eyes positioned in compliance with the saildrawing, at least 3 ties shall be fixed between the 2 eyes.
The area of windows in the mainsail must not exceed $0,2 \text{ m}^2$.
The weight of the mainsailcloth shall not be less than 150 g/m^2 .
- 3.5.4. The head sail shall be measured in compliance with the saildrawing in the rule.
The batten length must not exceed 50 mm.
The area of windows in the headsail shall not exceed $0,2 \text{ m}^2$.
- 3.5.5. No spinnaker is permitted.

3.6. The complete boat to sail must not weigh less than 89,5 kg.

4. Additional rules.

- 4.1. To race the SUPERNova the boat must have valid boat and sails certificates, and one crewmember must be a member of an officially recognized sailing club.
- 4.2. No SUPERNova may participate in a race without the standard SUPERNova masthead float in place.
The mastheadfloat shall be able to carry a weight of 9,5 kg. when floating.
The owner of the boat shall ensure that the mastheadfloat is fitted tightly.
All persons on board must wear personal buoyancy aid (i.e. lifevest).
- 4.3. No equipment not mentioned in the rules, shall be carried

while racing, except when stipulated by a race committee, but two wind indicators may be affixed anywhere on the boat. Ticklers and trimtape may be attached to the sails. No hiking aids except standard straps are allowed.

- 4.4. The SUPERNOVA can be raced in two classes namely light or heavy class as follows:

Light class: The crew weight including boyancy aids must not exceed 130 kg.
Only normal sailing clothes are permitted, but not exceeding 13 kg. per person when wet.

Heavy class: Crew weight exceeding 130 kg.
The crew weight including boyancy aids. Only normal sailing clothes are permitted, but not exceeding 15 kg. per person when wet.

Ballast may not be worn by any crew, this includes water retaining sweaters (wadding).

The crew composition shall be constant for the entire regatta, if it is two persons they may alternate at the helm.

Until January 1st 1983 a race committee may permit racing in one class only, without weight restrictions for evaluation purposes.

5. Amendments.

Amendments to these rules before 31st December 1982 can be instituted and approved by HPS.

However it is stressed that amendments will only take place if they prove necessary for the health of the class.

After January 1st 1983 the class will be governed by appropriate national and/or international organizations. However until the SUPERNOVA is accepted by IYRU any rule change shall be approved by HPS.

- 5.2. Until January 1st 1983 SUPERNOVA's not holding required certificates may at a race committees disgression participate in a regatta, this includes SUPERNOVA's produced wholly or partially by Blandford Marine or Spunk Boats ApS.

- 5.3. In the event that HPS should forfeit their solo marketing rights of the SUPERNOVA, Spunk Boats ApS will be substituted for HPS throughout these rules.
- 5.4. A race committee may permit SUPERNOVA's with temporary repairs effected in violating their certificates to race and complete one regatta.