



J
88

**TUNE YOUR RIG
FOR OUTRIGHT
SPEED**





We hope you enjoy your J/88 Tuning Guide. North class representatives and personnel have invested a lot of time to make this guide as helpful as possible for you. Tuning and trim advice offered here has been proven over time with top results.

North has become the world leader in sailmaking through an ongoing commitment to making sails faster, lighter and longer lasting. We are equally committed to working as a team with our customers.

As always, if you have any questions or comments we would love to hear from you. Please contact your Offshore One Design class representative.

Sincerely,

Ken Read

President North Sails Group

Equipment Required

30m (100') tape measure

Rig adjustment tools

WetNotes book

Safety harness / boatswains chair

North Sails J/88 Tuning Guide

A crew of five or six to go sailing.

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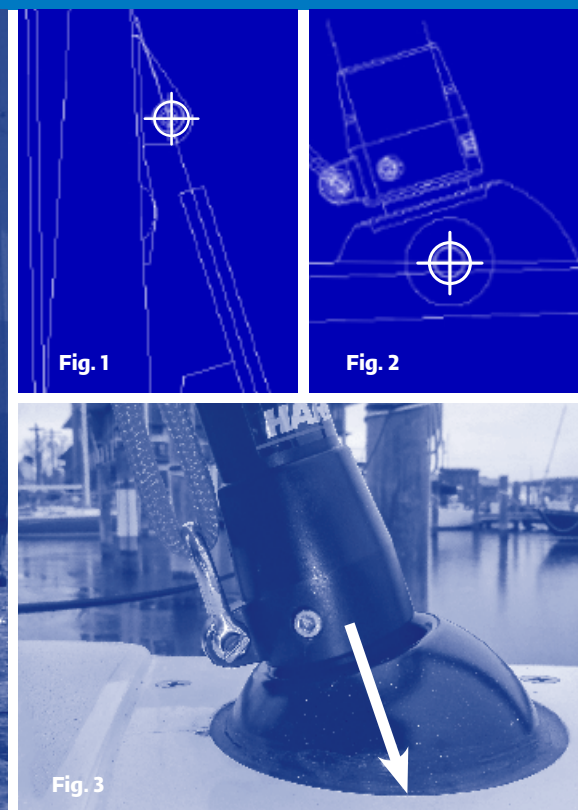
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Updates

North Sails is constantly refining tuning techniques and rig settings as we and our customers gain experience in individual classes. This information is shared among North staff worldwide.

While this tuning guide provides a giant step toward achieving competitive speed in your class, be sure to contact your North representative about the latest J/88 tuning developments.



The J/88

We are going to describe the steps to help you set up your new J/88 to the North Sails BASE settings. These settings will enable you to be competitive the first time you go sailing. Later we will offer additional suggestions to help you optimize your J/88 for specific sailing conditions. It's a good idea to keep an accurate, ongoing log of your boat's specific measurements (within tolerances allowed by the class) for reference to the North BASE settings. Ultimately you will develop your own settings that work with the way you drive and sail your boat in different wind and wave conditions. Don't be intimidated. The initial setup can be accomplished in as little as one hour's time.

Initial Headstay Set-up

Method 1: Pin-to-Pin

Before attaching the headstay lay it out flat and straight on the ground. Measure the height from the deck to the center of the roller pin pennant sticking up through the deck. Measure from the center of the

upper headstay pin to the center of the lower headstay pin. This length plus the height above deck of the lower pin should be 12.073m (39.61').

- Attach the headstay to the mast and raise the mast.
- Attach the headstay and each upper (cap) shrouds to the deck.
- Tighten the caps shrouds hand tight +2 full turns.
- Measure up from each cap shroud pin 1m (3.28') and make a mark on the shroud.
- Attach a full bucket of water to the center line headsail halyard, cleat the halyard with the bucket over the side of the boat just above the water line.
- Mark the halyard where it intersects with the previous mark on the shroud.

Fig. 1: Target mark above shows the center location of the upper pin. Pin-to-Pin measurement = 12.073m (39.61').

Fig. 2, 3: Arrow and target mark show the location of the lower pin for the Pin-to-Pin Method.



Fig. 1

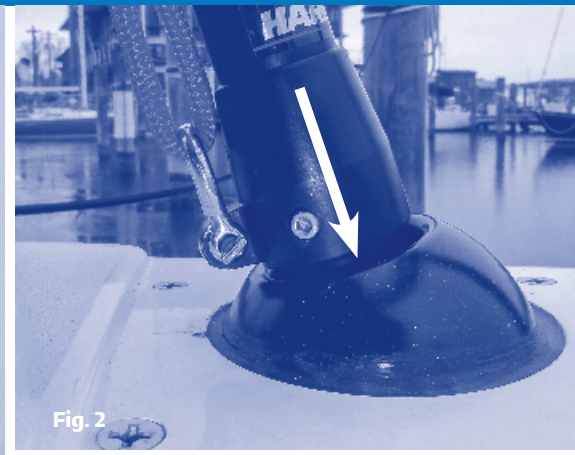


Fig. 2

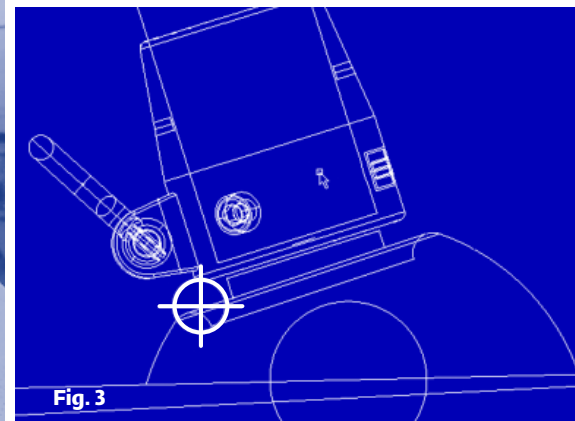


Fig. 3

Method 2 - ARC Measurement

If the mast is already in the boat use the ARC method to obtain the correct headstay length. Using the centerline headsail halyard pull it tight to the front of the mast plate /deck interface. Using the same pressure on the halyard swing it out to the headstay and make a mark on the headfoil. Measure from this headfoil mark down to the ARC location on the roller cover. Adjust the headstay turnbuckle so that the distance from the headfoil mark down to the roller cover is 82cm (2.69'). This is our BASE headstay length. After adjusting the headstay, check and adjust the side shrouds to get the Loos Gauge numbers recommended on page 7, Loos PT-2 Readings table.

NOTE: When checking the Loos Gauge numbers make sure there is no backstay or halyard tension altering the load gauge number results. See Tuning Guide on page 7.

Fig.1, 2: "ARC" method measurement points

Fig.3: Lower ARC location measurement point for Method 2.

Fig.4: Lower measurement points for the two methods of obtaining headstay lengths.

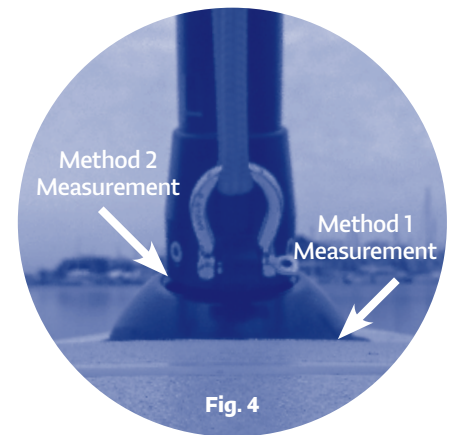


Fig. 4

Onboard Headstay Adjustment

Adjusting the headstay length on board:

Have extra cotter pins on hand to replace used ones at base of unit and for turnbuckle. Determine if the turnbuckle is located below deck or inside torque tube. If it's located inside, follow these steps:

- Rig a screw catcher.
- Hold foils and loosen torque tube screws until you can pull clamp part way out in order to lower foils.
- Lower foils.

Fig. 1: Start by loosening, but do not remove, the top four Allen screws.

Fig. 2: Remove the three screws at the base of the torque tube.

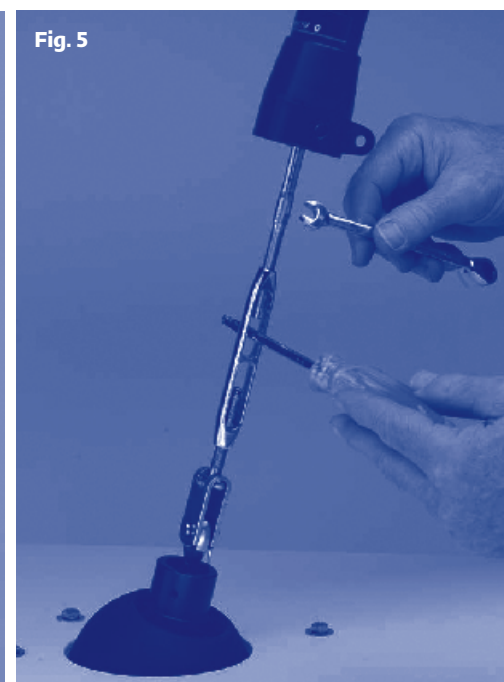
Fig. 3: Note the three tools needed to make a headstay adjustment.

Fig. 4: Use a halyard to keep the headfoil above the adjustment turnbuckle when adjusting.

Fig. 5: Adjust turnbuckle.

Check location of turnbuckle. It may be below deck under the hub assembly. If it is inside the torque tube, follow this procedure: slide torque tube onto foil and clamp just below top of feeder gap as shown. Use halyard to lift foil assembly. Reassemble torque tube to lower unit. Lift foils so top is 11mm (7/16") below upper terminal. Slide foil clamp into foil notches and tighten screws to secure.

CAUTION! To avoid injury, make sure drum assembly and foils are securely lifted using a halyard before adjusting turnbuckle.



Tuning Guide

North Sails BASE Setup for 10-12 kts

| Caps / Uppers | Intermediates / D2s | Lowes / D1s |
|---------------|---------------------|-------------|
| 35 | 15 | 7 |

J/88 VPP Upwind

| TWS | TWA | Boat Speed | Heel |
|--------|-----|------------|------|
| 6 kts | 43 | 4.69 | 4 |
| 8 kts | 41 | 5.61 | 9 |
| 10 kts | 39 | 6.19 | 21 |
| 12 kts | 37 | 6.34 | 23.5 |
| 14 kts | 35 | 6.42 | 24.5 |
| 14 kts | 34 | 6.47 | 26 |

J/88 VPP Downwind

| TWS | TWA | Boat Speed | Heel |
|--------|-----|------------|------|
| 6 kts | 143 | 4.74 | 12 |
| 8 kts | 144 | 5.80 | 12 |
| 10 kts | 149 | 6.38 | 12 |
| 12 kts | 158 | 6.59 | 12 |
| 14 kts | 165 | 6.78 | 12 |
| 14 kts | 168 | 7.12 | 12 |

Sail Models

| Sail | Model | Sail Type | TWS | 3D/Cloth | Product Type |
|-----------|--------------------|------------|---------|----------|-----------------|
| Main | MN-2 | AP | | 3DL | 860M 12600 |
| Jib | APi-2 Class Jib #1 | AP | 0-18kts | 3Di | 780iM RAW 12600 |
| Jib | Hi-1 Class Jib #2 | Heavy | 14+kts | 3Di | 780iM RAW 12600 |
| Spinnaker | A2-1 | Asymmetric | 0-25kts | AirX | 650 |
| Spinnaker | A1/3-1 | Asymmetric | 17+kts | AirX | 700 |

Loos PT-2 Readings

| TWS | D1 | D2 | V |
|--------------------|----------|-----------|-----------|
| 6 kts | 6" twirl | 8 | 30 |
| BASE 11 kts | 7 | 15 | 35 |
| 15 kts | 18 | 21 | 38 |
| 20 kts | 24 | 29 | 43 |

Number of Full Turns from BASE

| TWS | D1 | D2 | V |
|--------------------|----------|----------|----------|
| 6 kts | -5 | -3 | -3 |
| BASE 11 kts | 0 | 0 | 0 |
| 15 kts | 2.5 | 2.5 | 3 |
| 20 kts | 5 | 5 | 6 |

Wire Style

| D1 | D2 | V |
|----------|----------|----------|
| 6 Dyform | 5 Dyform | 6 Dyform |

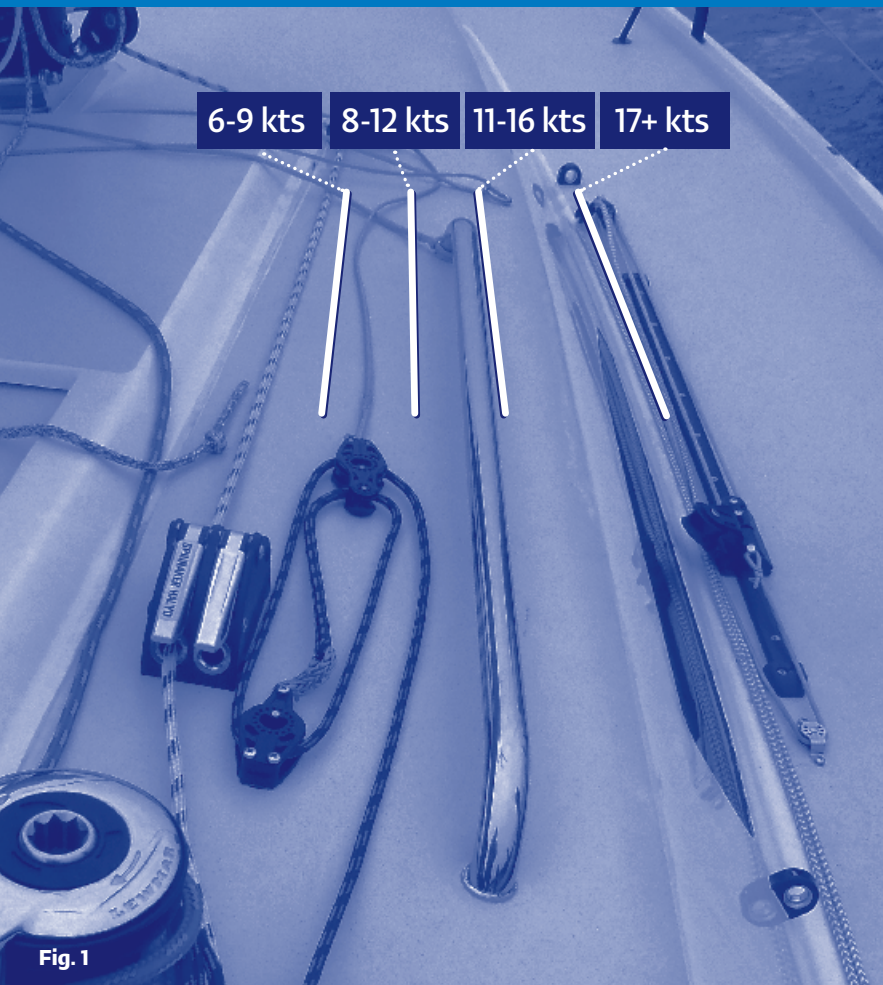


Fig. 1

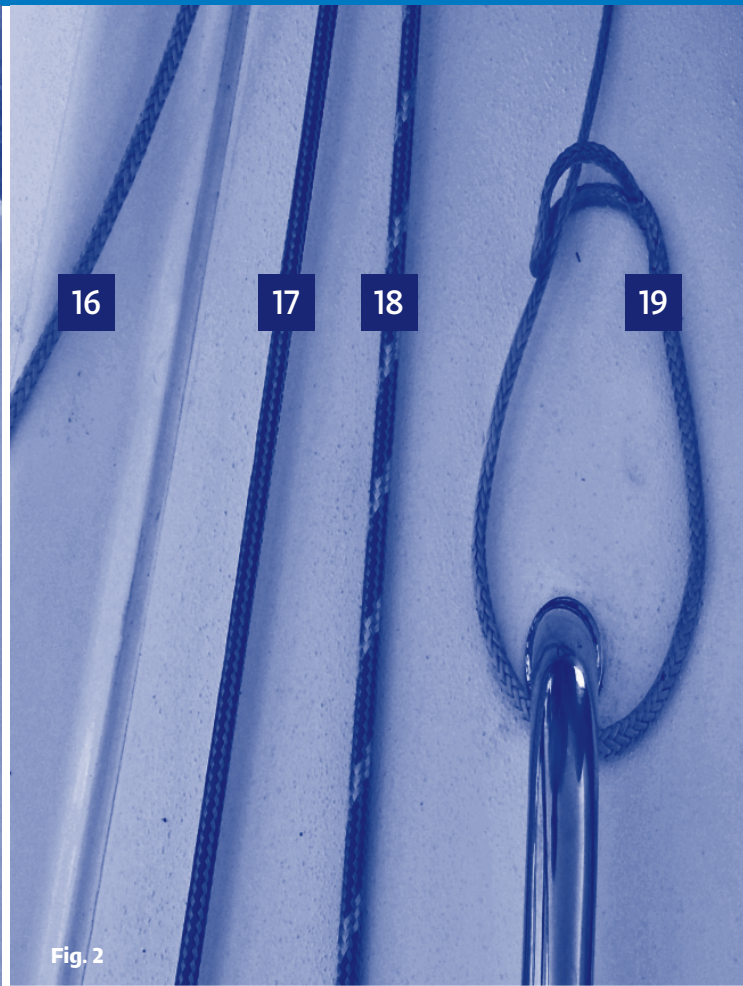


Fig. 2

Sailing Setup

Headsail Inhaulers

Location of the headsail clew inboard in different wind speeds.

Fig. 1: Jib sheeting angles will be subject to the amount of chop. With more waves the set-up should have more headsail twist.

Fig. 2: Photo shows degrees of sheeting angles with the grab rail at approximately 8.5 degrees

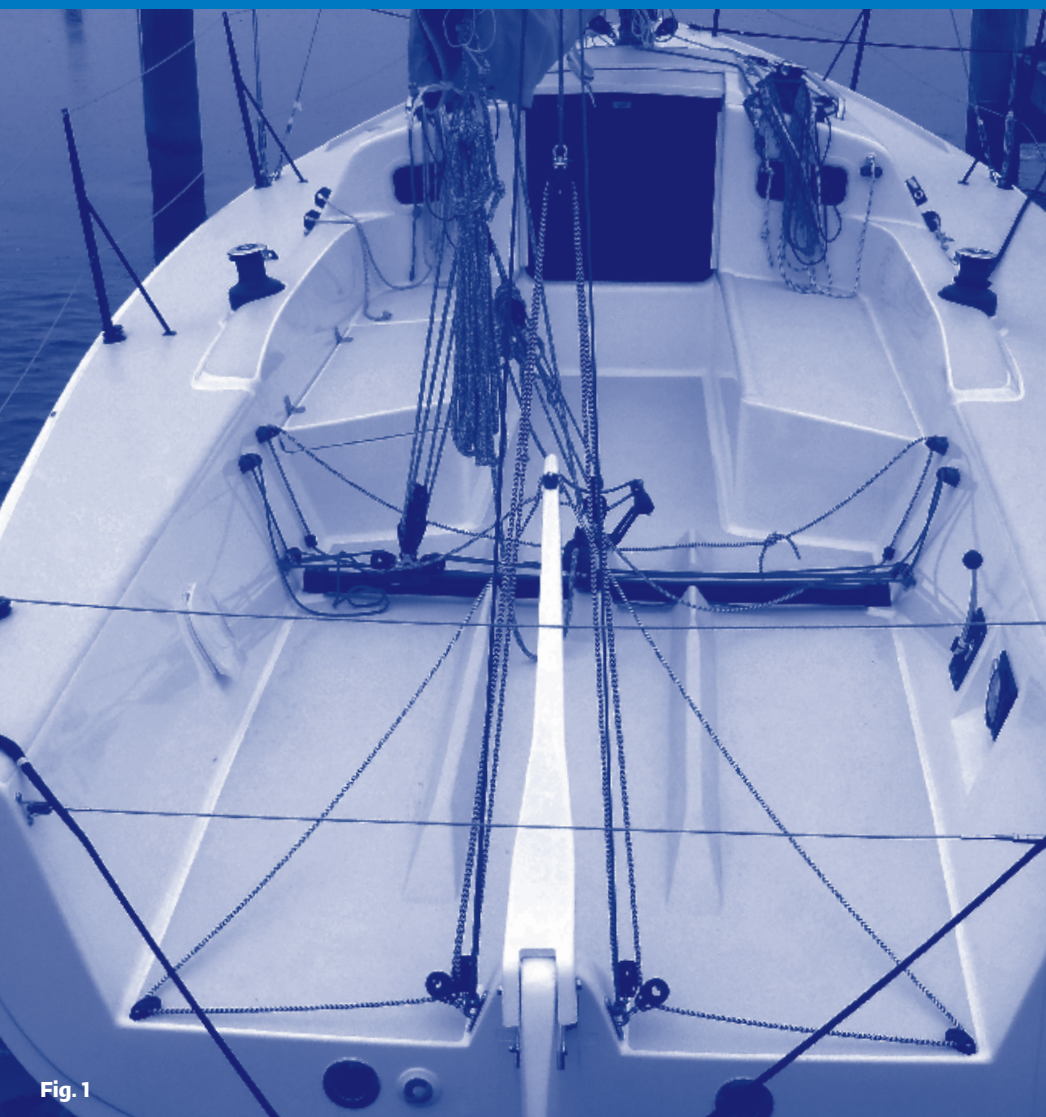


Fig. 1



Fig. 2



Fig. 3

North Sails Tips for J/88

It is very important to make sure the backstay is the correct length so that at maximum tension the lower block and backstay purchase does not restrict the amount the tiller can turn. Attach the asymmetric tack as close as possible to the fitting so the maximum luff length of the sail projects well and is more stable in chop. Use the full distance from the tackline fitting to the asymmetric halyard shackle for the sail.

Fig. 1: Clean J/88 cockpit showing a loose backstay.

Fig. 2: The latest pole and fitting giving the asymmetric tack downhaul a 2:1 purchase system.

Fig. 3: Don't forget to use your North Canvas mainsail cover to protect the sail.

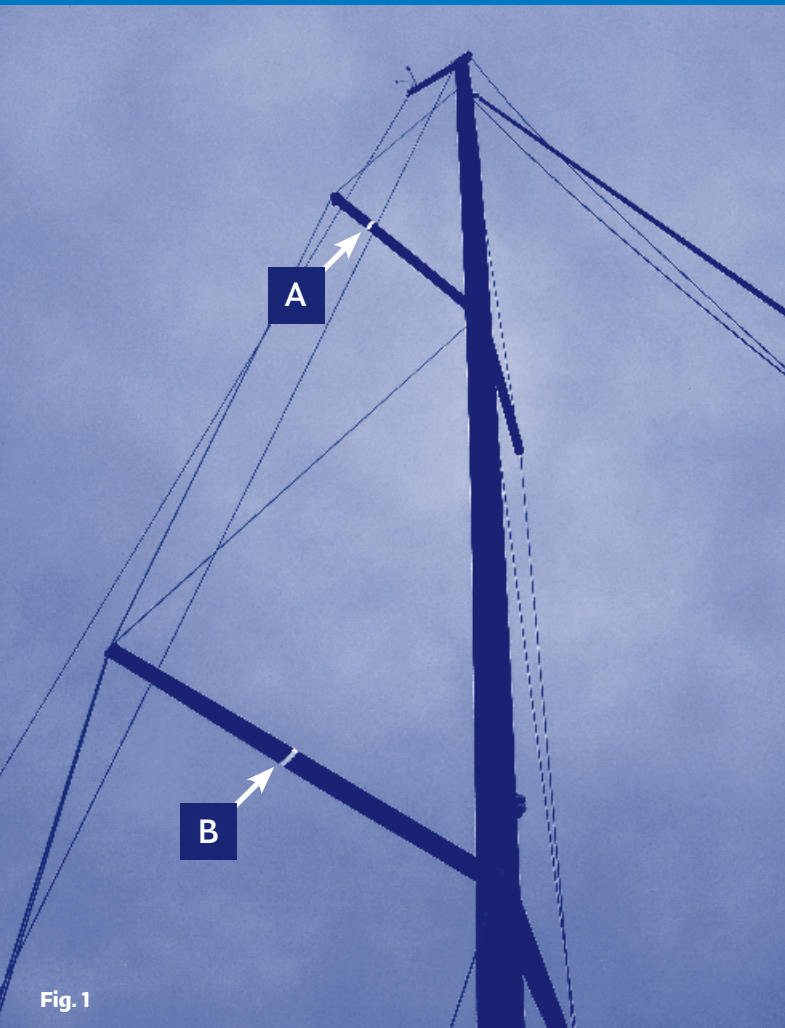


Fig. 1



Fig. 2

Jib Leech Spreader Marks

From mast track centerline:

Fig. 1:

A: Top spreader jib leech mark
640mm (25.20").

B: Bottom spreader jib leech mark
850mm (33.47").

Fig. 2: Look closely at the spreaders, the white marks are located where suggested above. Headsail clew is inhaled to the grab rail.



Upwind Sailing (above)

Crew weight will have to be coordinated to help the trimmers keep optimum heel angle both upwind and downwind. Note the bow knuckle kissing the water (top left), and in the Key West photo (top right) the weight is distributed side to side to maintain the correct heel angle.

Downwind Sailing (below)

The J/88 should sail well downwind with a large asymmetric. Weight placement fore and aft is crucial to obtain optimum angles and speed. Notice how straight and vertical the sail flies with little heel on the boat. Maximum downwind heel in almost all conditions is 12 degrees.





Worldwide Service

At North Sails, we view each sail purchase as the beginning of a long and rewarding relationship. We base this expectation on a strong service commitment that includes preventive maintenance, sound advice, education and expert repairs.

North Sails is a network of more than 100 lofts in 34 countries around the world. Each offers knowledgeable, friendly, personal sales and service. Our size and worldwide reach also means North has the world's most expansive sailmaking database. It would be hard to find a sailboat for which we cannot make a fast, durable and long lasting sail.

All North Lofts offer:

- Annual checkover
- Winter storage
- Retrofitting
- Educational
- Sail washing
- Sail tune-up
- Seminar resources



The North Promise

North Sails proudly stands by every product it makes. Our years of innovation, research and testing make us confident in the high quality of our products.

This is why with every Cruising, Racing or One Design sail we offer free sail care and repair, honoured anywhere in the world through our network of service locations.

Terms & conditions apply

For more information visit the North Sails Offshore One Design website at:

offshoreonedesign.com

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For other useful information visit the J/88 class website

www.j88class.org