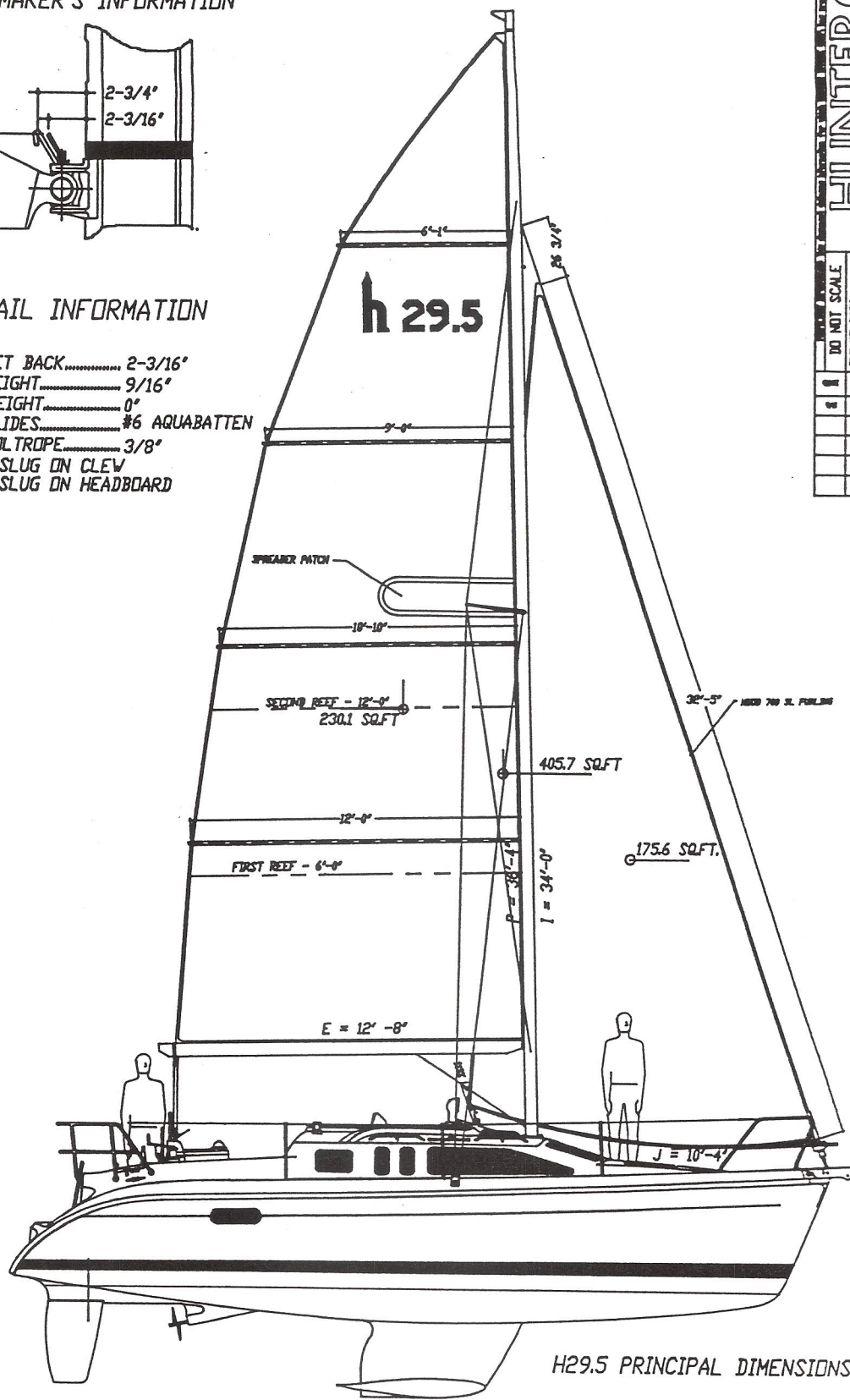
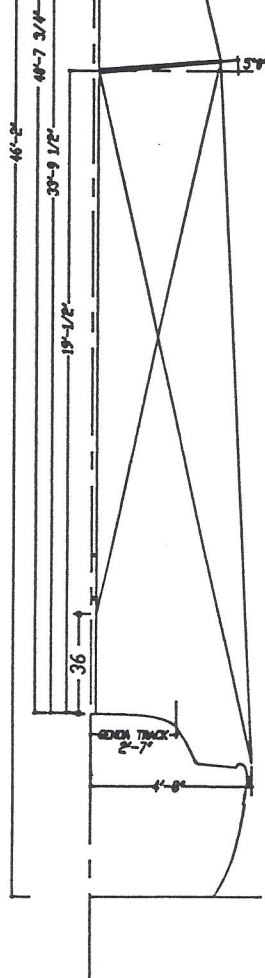


TACK SET BACK.....2-3/16"  
TACK HEIGHT.....9/16"  
CLEW HEIGHT.....0"  
LUFF SLIDES.....#6 AQUABATTEN  
FOOT BOLTROPE.....3/8"  
1 ALUM SLUG ON CLEW  
1 ALUM SLUG ON HEADBOARD



LDA \_\_\_\_\_ 29'-6"  
LVL \_\_\_\_\_ 27'-0"  
BMAX \_\_\_\_\_ 10'-6"  
DRAFT \_\_\_\_\_ 4'-0"  
DISPLACEMENT \_\_\_\_\_ 8000 LBS  
BALLAST \_\_\_\_\_ 2680 LBS  
HEIGHT ABOVE LVL \_\_\_\_\_ 46'-2"

[illegible]





# TUNING THE 29.5 FRACTIONAL B&R RIG

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## THE HUNTER 29.5 FRACTIONAL B&R RIG

The Hunter 29.5 rig utilizes swept back spreaders and shrouds to support the mast fore and aft as well as transversely. This tripod support system eliminates the need for a conventional backstay allowing the aft component of the shrouds to support the forestay loading directly. Therefore, forestay tension and forestay sag are directly controlled by upper shroud tension. For that reason it is very important that the upper shrouds are as tight as possible. It is also important in this rig configuration that the mast be tuned with a substantial amount of "pre-bend" for maximum rig stability. The following tuning instructions are designed to achieve those goals.

## BEFORE STEPPING THE MAST

Install the spreaders on to the spreader bar, being careful to note which spreader is labeled "starboard". The spreaders are custom fit to each spreader bar and are designed to fit snug against the mast wall. To ease the installation, and align the holes, it may be necessary to squeeze the mast together ever so slightly at the spreader base with a large wood clamp or a large, well padded, metal "C" clamp. Install the rigging to the spar and spreader tip. See Drawing #H29A2654. Remove all clevis and cotter pins from the turnbuckles and place the corresponding pins close by the appropriate chainplate and forestay fitting. Open all turnbuckles to the maximum, making sure that there is still enough thread gripping that the turnbuckles don't come apart. Install the Windex instrument, VHF antenna and masthead light and any additional wind instruments on the masthead. The Windex mounts on an aluminum bar extending aft to allow it to clear the VHF antenna. If not already attached to the mast head, this bar may be in the "loose gear" kit. Also make sure that the interior cover plate inside the boat on the overhead liner at the top of the mast compression post is removed to allow access to the mast wiring. It is always wise to pad and tape the tips of the spreaders to prevent them from chafing the mainsail when the main is eased. The spar should be hoisted from a location just above the spreaders. If not already done, run the halyards in the spar using the messenger lines installed. Install the reefing lines, outhaul & mainsheet in the boom. When all the rigging is attached, induce 4" of "pre-bend" by tensioning the diamonds. Make sure that this bend occurs longitudinally only, and that the mast is still straight transversely.

# TUNING THE 29.5 FRACTIONAL B&R RIG (CONT)

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## STEPPING THE MAST

During stepping make sure that the electrical wiring for the VHF and mast lights is pulled through the hole in the deck on top of the mast step for connection below deck. After stepping your mast, attach the lower shrouds to the forward of the three holes in each chainplate and the main shrouds to the aft holes. The turnbuckles should be installed with the cotter pins located inboard. With the turnbuckles still eased all the way, attach the forestay to the stem head casting using the two link plates and 5/8" diameter pin supplied for that purpose. A jib halyard run forward to the "U" bolt in the anchor locker may have to be used to achieve enough slack to connect the forestay. Tension the shrouds to remove most of the slack, making sure that the port and starboard turnbuckles for each shroud pair (mains & lowers) are tensioned uniformly. When all the standing rigging is attached and the slack removed unrig the lifting hoist. Run the halyards from their exits in the spar through the appropriate block on the mast step, through the deflector blocks and aft through the rope clutches, as outlined on the Running Rigging Drawing (H29A2612). Rig the Boom to the mast and attach the mainsheet & vang.

## PLUMBING THE MAST & SETTING THE RAKE

To center the mast athwartships, start with only slight tension on the main and lower shrouds. Check that the mast is centered in the boat by measuring from the masthead to the chainplates with a steel tape measure hoisted completely up the main halyard. Adjust the main shrouds, easing one and tightening the other, until the measurements port and starboard are exactly the same. If a steel tape isn't available, the main halyard can also be used for this purpose being careful that equal tensions are applied each side. Once the mast is plumb athwartships, check the amount of rake or aft angle on the mast by hanging a weight from the shackle on the main halyard and adjusting the halyard position so the weight hangs just above the boom. On a calm day, with nobody on the boat, this weight should hang 12 to 14 inches aft of the mast. Adjust the main shrouds uniformly, easing or tightening the same number of turns each side, and the forestay to achieve the proper amount of rake.



# TUNING THE 29.5 FRACTIONAL B&R RIG (CONT)

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## INITIAL TUNING

### TIGHTEN THE MAIN SHROUDS

With the mast plumb athwartships and the proper amount of rake achieved, tension both main shrouds equally, counting turnbuckle revolutions as you go. As you tighten the mains, the amount of "prebend" will increase as the spreaders push the middle of the mast forward. As this happens, the previously tensioned diamonds will go slack. At this point, tension the lowers and bring the "prebend" back to the original amount and thus remove the slack from the diamonds. Make sure that the lowers are tensioned uniformly so that no transverse curvature is introduced.

### TIGHTEN THE FORE STAY

Lift the furling drum and tension the forestay turnbuckle until it is 1/3 to 1/2 closed.

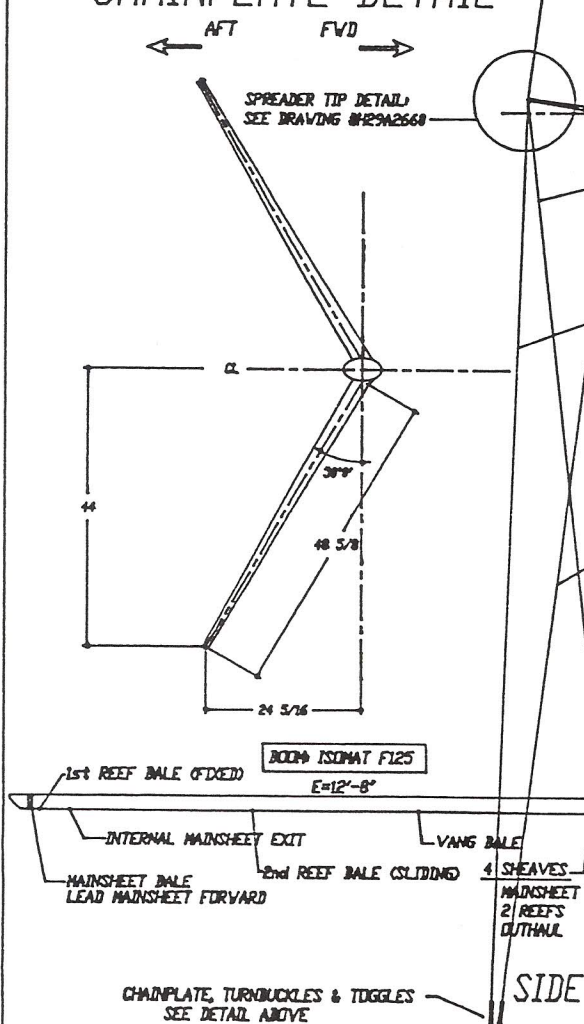
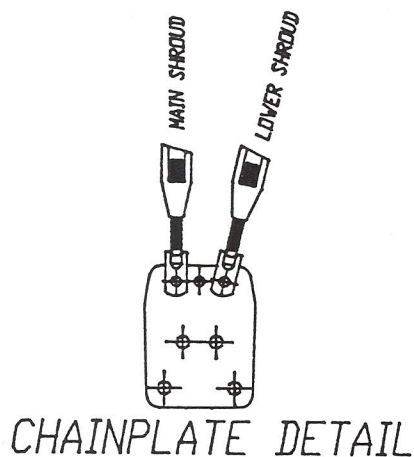
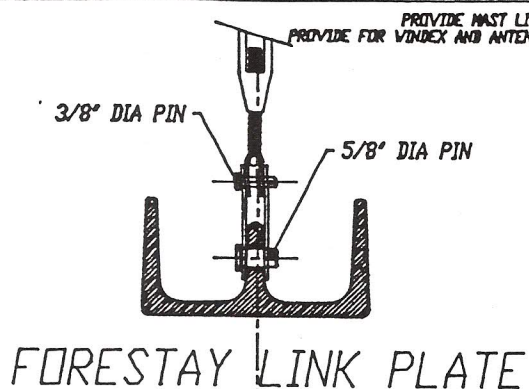
## FINAL TUNING

After the rigging is adjusted as above and the mast is straight amidships and has the necessary 4" of pre-bend, continue tensioning the main shroud turnbuckles uniformly each side (counting & matching the same number of half turns) with a wrench and a screw driver until no more tension can be applied without exceptional effort. Do not use any artificial means, such as pipe extensions on the wrench and screw driver, to achieve additional tension. Lift the furling drum again and tension the forestay an additional four to six turns.

### CHECKING THE RIG'S TUNING

Check the mast tuning by sailing in medium winds (10-12 knots). Sometimes fine tuning the diamonds and lower shrouds is necessary when the spar is loaded in sailing conditions. Sail on both tacks, sighting up the luff groove to check athwartship straightness. When sailing with full main and jib all the leeward rigging should remain taught.

When mast tuning is complete, install cotter pins in all turnbuckles and tape over sharp edges of the cotter pins with chafe tape.

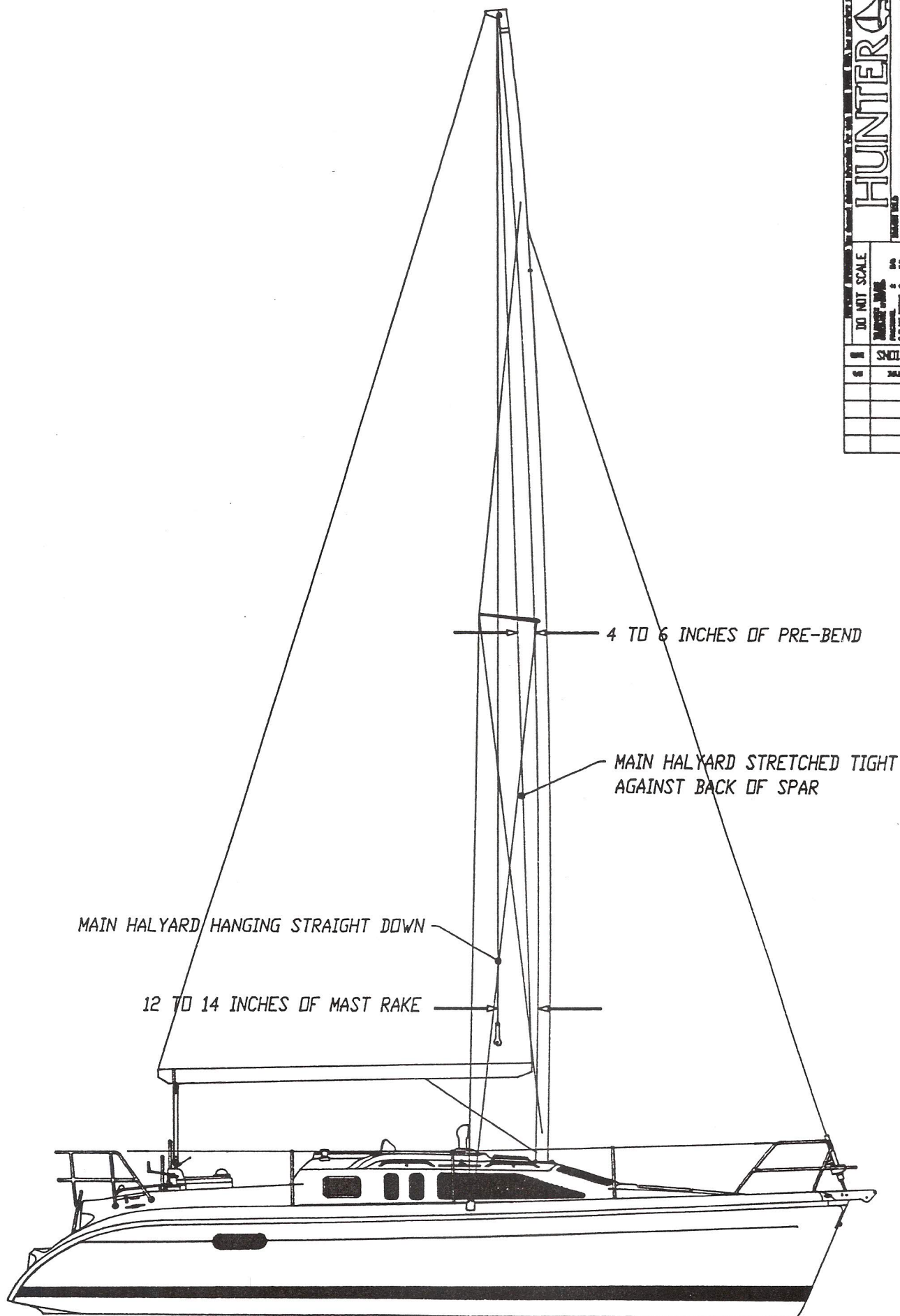


SIDE VIEW

TURNBUCKLE, TUGGLE & LINK PLATES TO STEM CASTING  
SEE DETAIL ABOVE

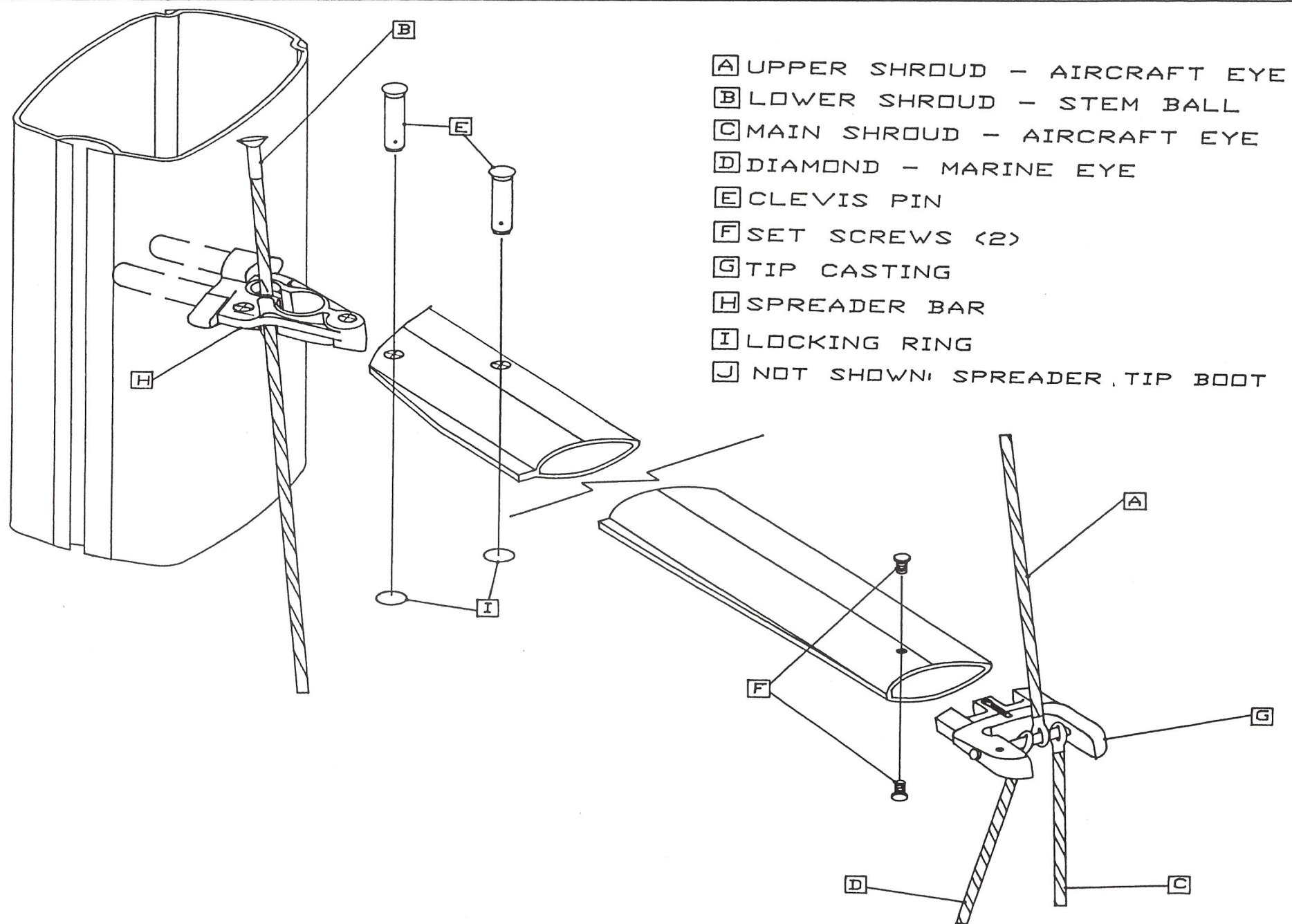
FRONT VIEW

<p>For Detailed Engineering Information See Each HUNTER HUNTER COMPANY and associated table.</p>			
<p><b>HUNTER</b></p>			
<p>H29.5 MAST &amp; RIGGING</p>			
<p>DATE</p>	<p>19 MAY/94</p>	<p>REV</p>	<p>NONE</p>
<p>BY</p>	<p>DEF</p>	<p>DATE</p>	<p>H29A2634</p>

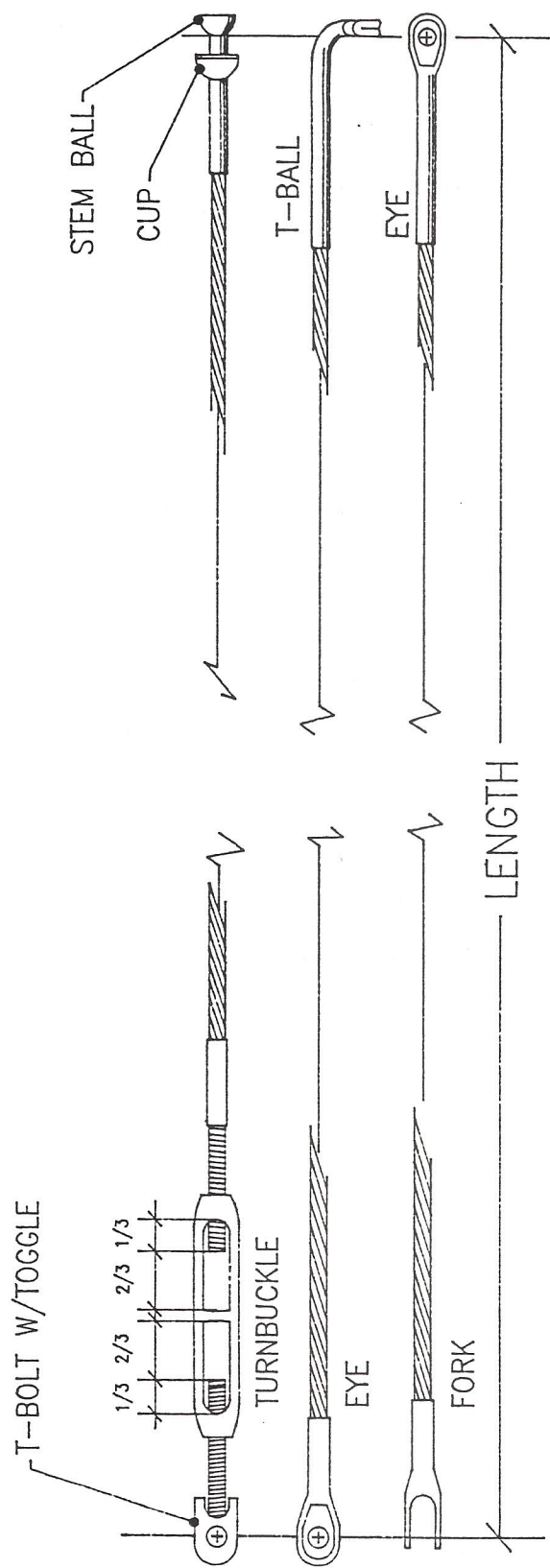


DO NOT SCALE		HUNTER		H29.5 MAST PRE-BEND & RAKE	
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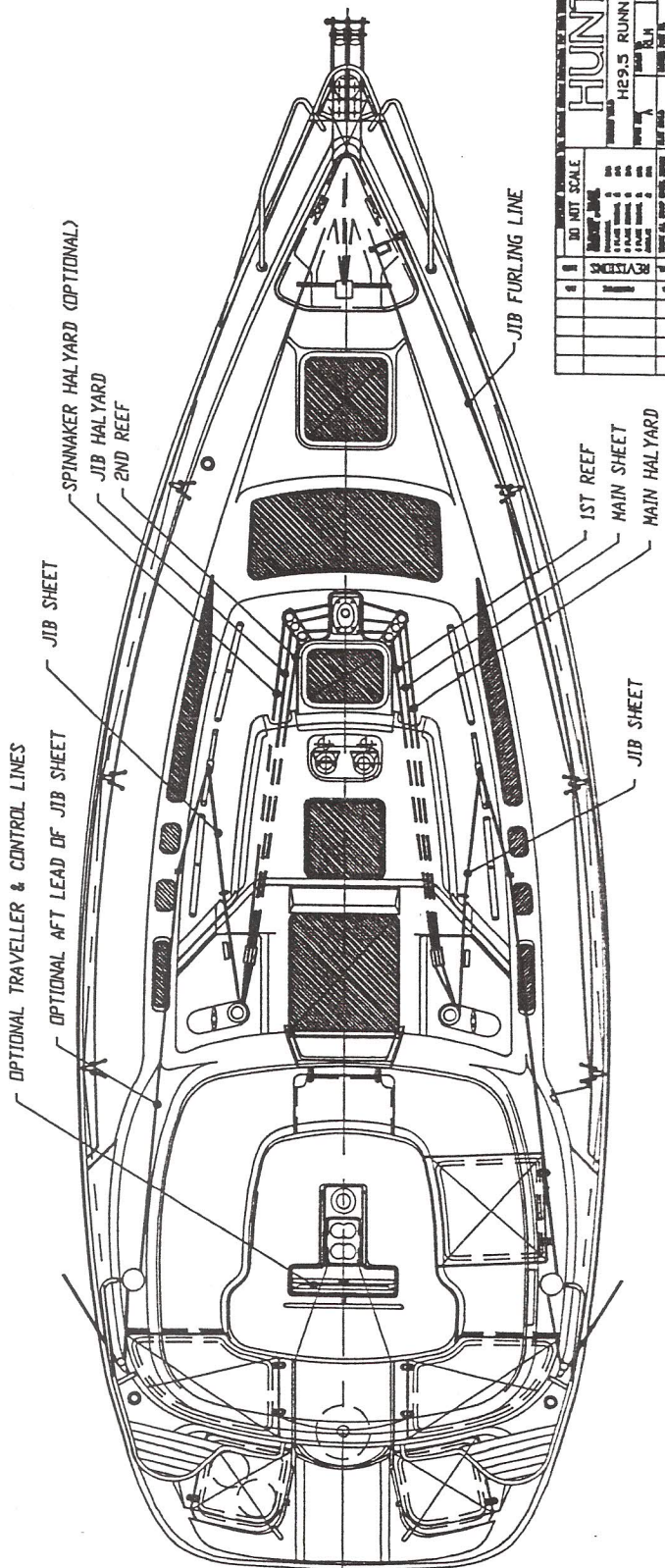


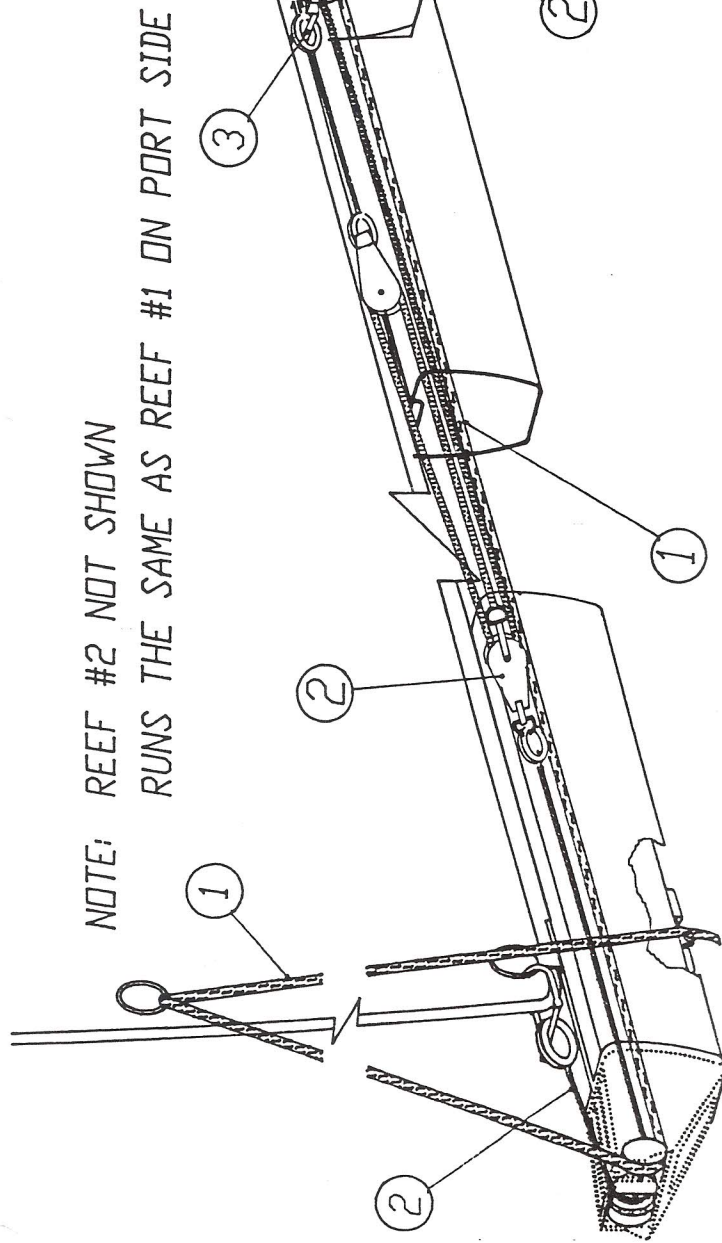




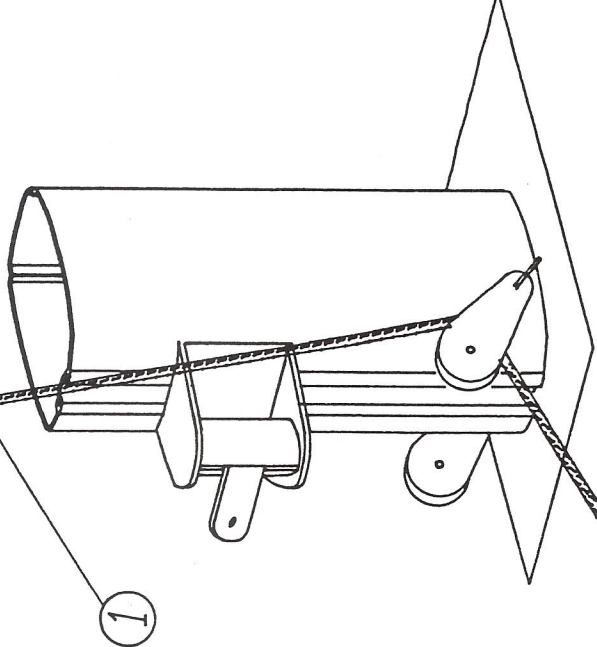
# HUNTER

RIGGING LENGTH STANDARDS H29-A-2632

[illegible]



- ① #1 REEF LINE STARBOARD SIDE
- ② OUTHHAUL - 3:1 PURCHASE
- ③ OUTHHAUL WIRE DEADEND



# HUNTER 4

BOOM AND REEF LAYOUT H29A2659



# HUNTER 29.5 RIGGING SPECIFICATIONS

## STANDING RIGGING

### FITTINGS

<u>Description</u>	<u>Wire Size</u>	<u>Upper End</u>	<u>Lower End*</u>	<u>Overall Length</u>	
Forestay*	7/32"	marine eye w/d.j. toggle	7-12-12 turnbuckle w/toggle	35'-7 1/2"	**
Uppers	1/4"	stemball	AN eye	14'-8 5/8"	
Main	1/4"	AN eye	8-12-12 turnbuckle w/toggle	21'-0"	
Lowers	1/4"	stemball	8-12-12 turnbuckle w/toggle	21'-0 1/2"	
Diamond	3/16"	marine eye	stemball	16'-11 3/4"	

All wire is 1 x 19 type 316 stainless steel.

\*Includes 3" link plate

"X-X-X" represents the turnbuckle size as follows:

Wire size/body size/pin diameter in 32nd's of an inch.

Example: 7-12-12 is a turnbuckle that accepts a 7/32" wire, has a 3/8" (12/32") thread diameter in the body, and uses a 3/8" (12/32") pin.

\*\* See H29-A-2632 "Rigging Length Standards" for details

## RUNNING RIGGING (STANDARD)

<u>Line</u>	<u>Color Code</u>	<u>Size</u>	<u>Attachments</u>	<u>Overall Length</u>
Main Halyard*	Black	3/8"	Headboard shackle	93'
Jib Halyard*	Blue	3/8"	Swivel snapshackle	82'
Main Sheet	White	3/8"	B.B.E. **	80'
Jib Sheets (one piece)	White	7/16"	B.B.E.	56'
Outhaul	White	5/16"	B.B.E.	27'
1st. Reef	Green	3/8"	B.B.E.	44'
2nd. Reef	Red	3/8"	B.B.E.	56'
Furling Line	White	1/4"	B.B.E.	35'
Topping Lift	White	1/4"	B.B.E.	78'
Anchor Line	White	3/8"	Shackle	100'
Boom Vang	White	3/8"	Eye splice	25'

\* XLS low stretch line

\*\* Burned Both Ends

All other lines low stretch Dacron except anchor line which is nylon.

# HUNTER 29.5 RIGGING SPECIFICATIONS

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## RUNNING RIGGING (OPTIONAL)

<u>Line</u>	<u>Color Code</u>	<u>Size</u>	<u>Attachments</u>	<u>Overall Length</u>
Traveller Control Line (2) D	White	5/16"	eye splice	4'-0"
Spinnaker Halyard*	White	3/8"	swivel snap shackle	86'-0"
Spinnaker Sheets (2)*	White	3/8"	swivel snap shackle	55'-0"
Spinn. Tack Line (Cruising) *	White	3/8"	snap shackle each end	4'-0"
Spinn. Tack Line (Racing) *	White	3/8"	swivel snap shackle	40'-0"
Spinn. Bobstay (Racing) * & **	White	3/8"	BBE ***	5'-0"
Pole Launch Line (Racing) *	White	3/8"	BBE	35'-0"
Pole Retraction Shock Cord (Racing) *		1/2"	BBE	12'-0"

\* Dealer or Customer Supplied

\*\* Spectra

\*\*\* Burned Both Ends