

1 OPT SPINNAKER HALYARD 2 JIB HALYARD

3 #2 REEF

4 VANG LINE

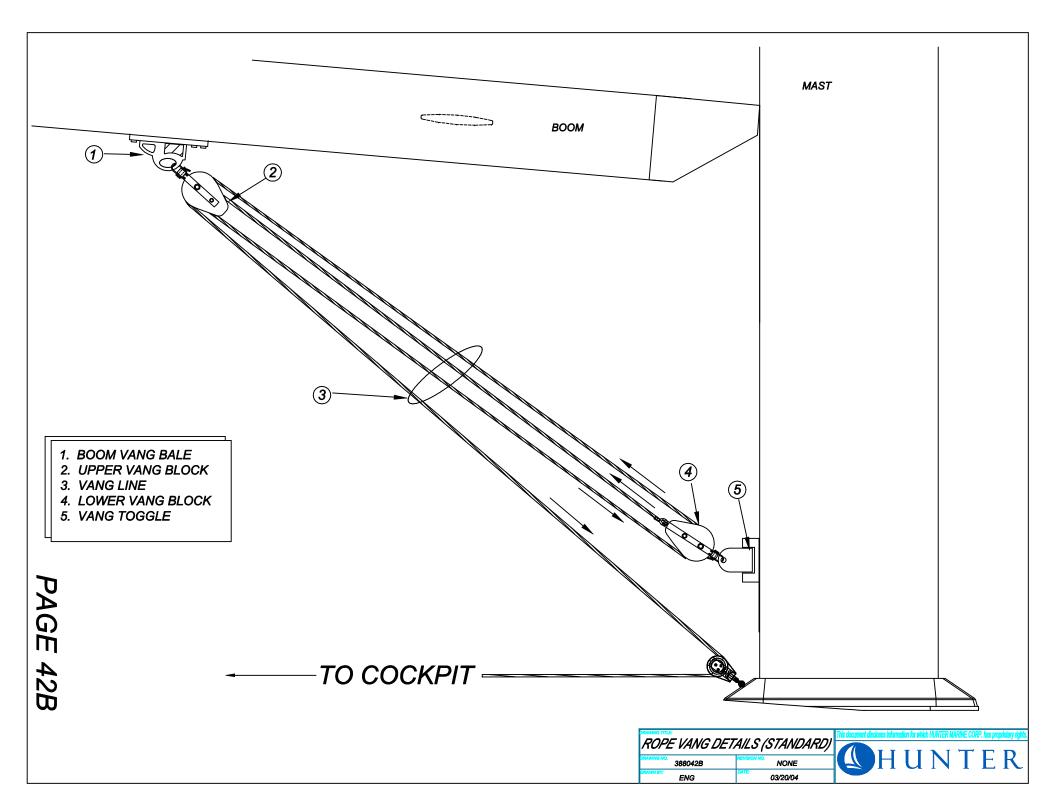
5 MAINSHEET

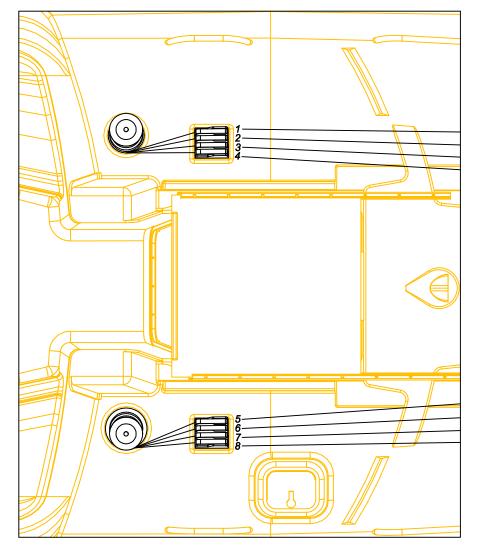
6 #1 REEF

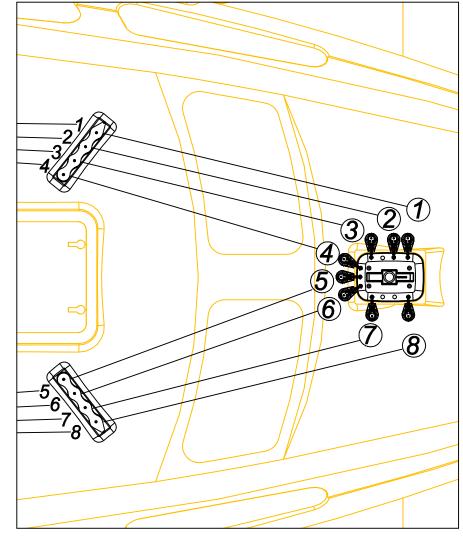
7 MAIN HALYARD

ALL BLOCKS 72mm









1 OPT SPINNAKER HALYARD **

2 JIB HALYARD **

3 FURLING LINE *

4 FURLING LINE *

5 VANG LINE **

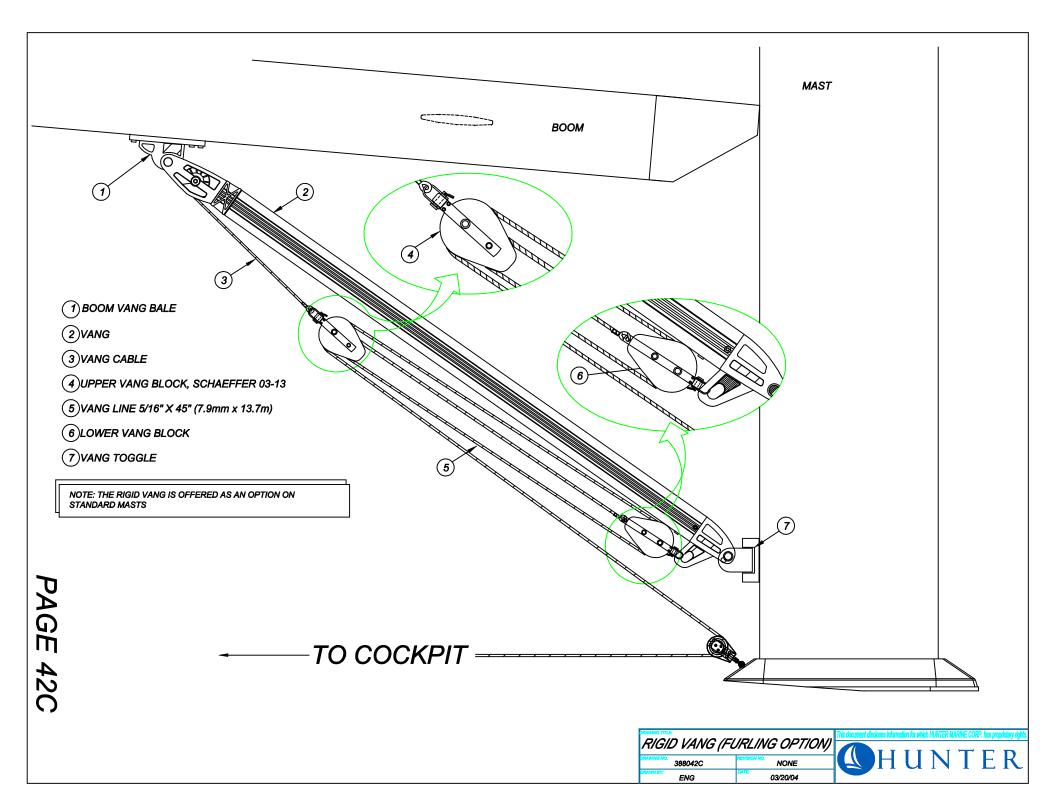
6 OUTHAUL **

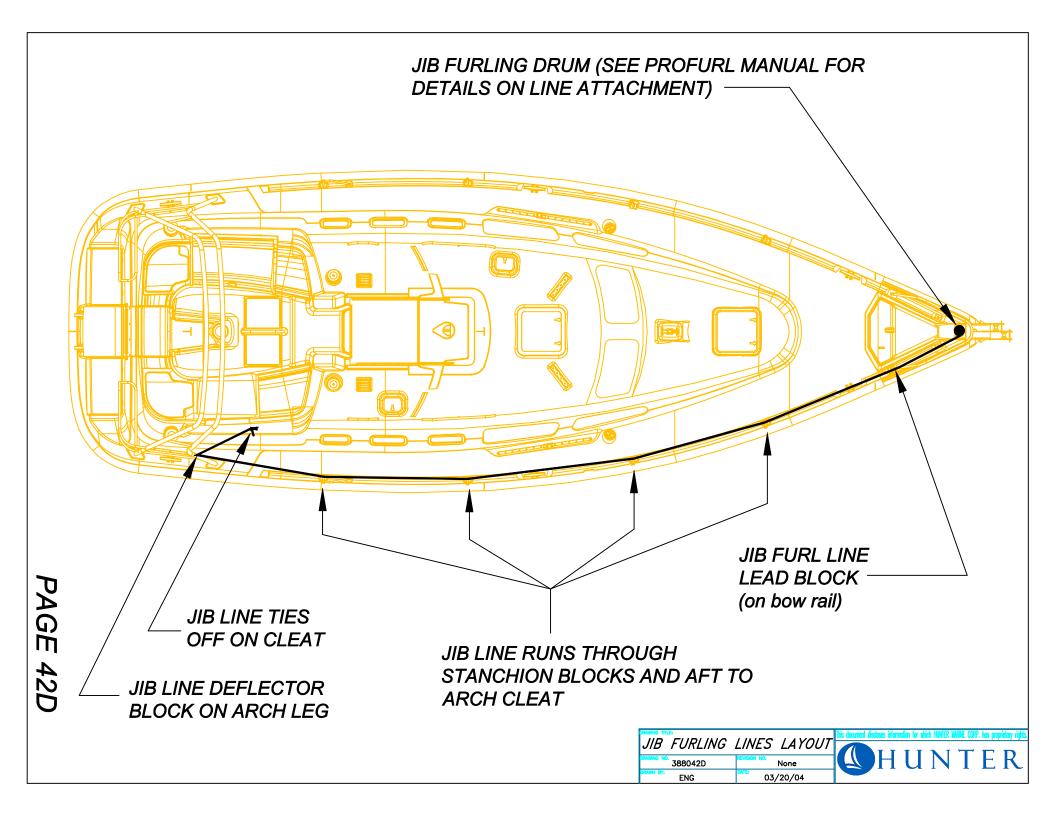
7 MAINSHEET **

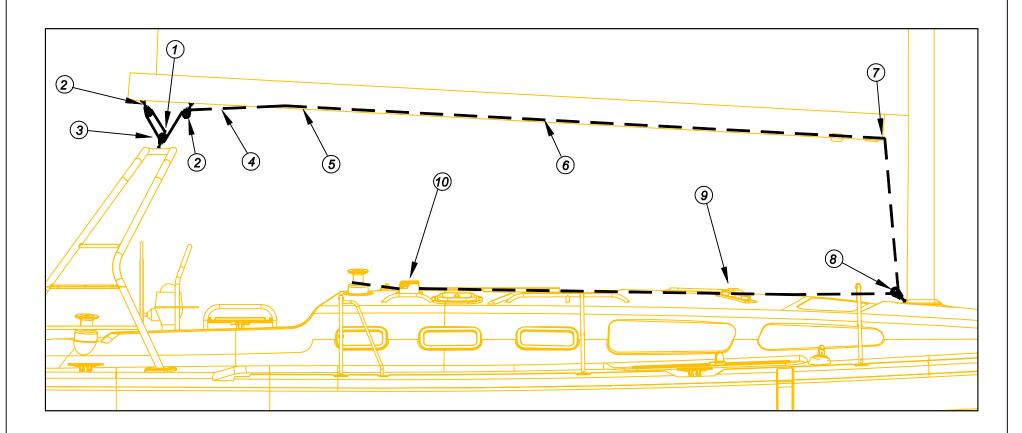
8 MAIN HALYARD **

* 60mm BLOCK ** 72mm BLOCK

FURLING RUN	NING RIGGING	This document discloses information for which HUNTER WARNE CORP, has proprietory rights.
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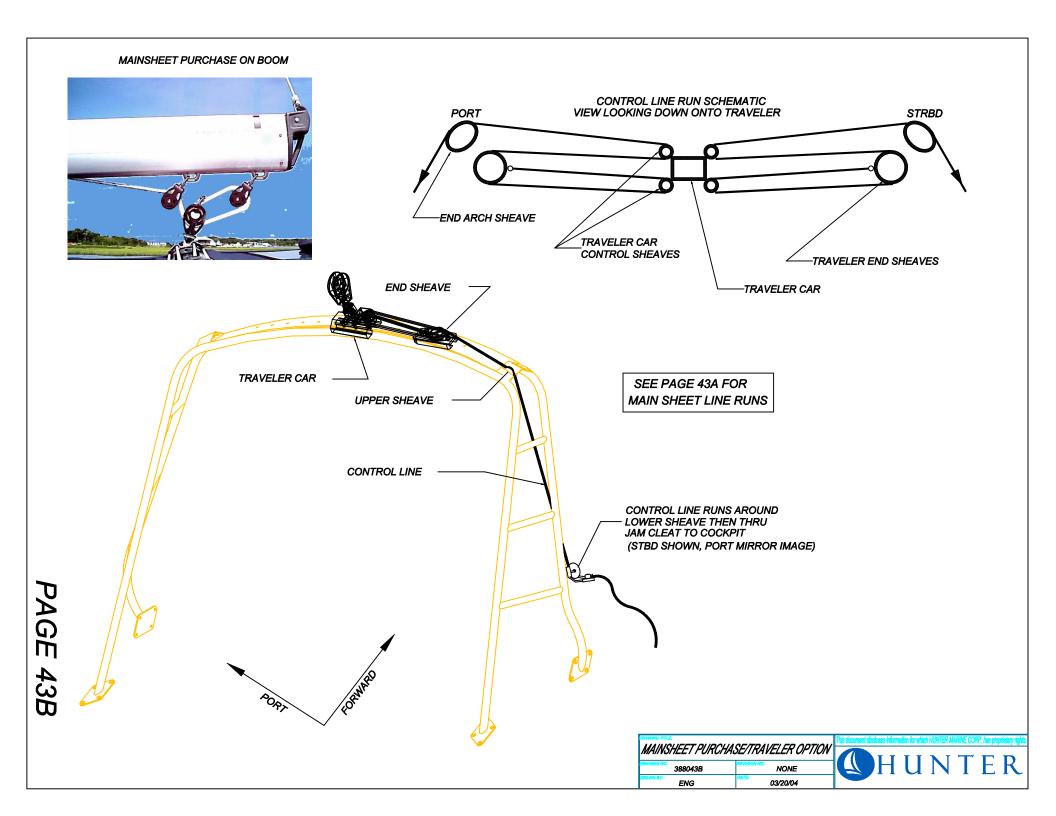


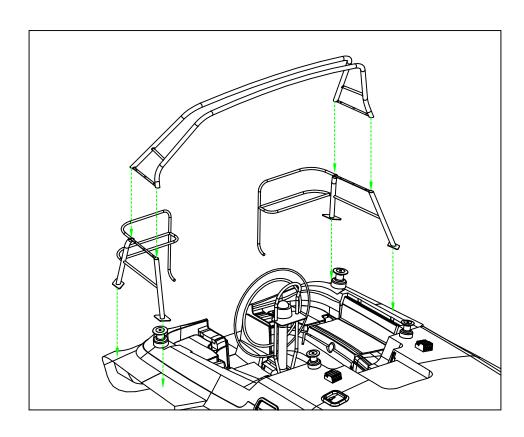


- 1 ARCH BALE (MAINSHEET PURCHASE END TIE OFF)
- 2 BOOM BALE AND MAINSHEET BLOCK
- 3 ARCH MAINSHEET BRIDLE
- 4 MAINSHEET
- 5 MAINSHEET BOOM EXIT
- 6 MAINSHEET RUN INSIDE BOOM
- 7 MAINSHEET SHEAVE INSIDE FWD BOOM END
- 8 MAINSHEET BLOCK AT MAST STEP
- 9 MAINSHEET THRU BLOCK DEFLECTORS
- 10 MAINSHEET THROUGH BLOCK ORGANIZERS TO WINCH

SEE FOLLOWING PAGES FOR DETAILS OF STANDARD BRIDLE AND OPTIONAL TRAVELER CONFIGURATIONS







FOR CLARITY, THE STERNRAILS ARE DEPICTED IN AN EXPLODED VIEW AND THE STEERING PEDESTAL HAS BEEN OMITTED

ARCH INSTALLATION: NOTES AND TOOL LIST

NOTES:

- 1. <u>IMPORTANT:</u> READ ALL OF THE INSTALLATION INSTRUCTIONS THOROUGHLY BEFORE BEGINNING.
- 2. THIS JOB REQUIRES TWO PEOPLE. IT IS IMPORTANT THAT THE ARCH IS FIRMLY SUPPORTED UNTIL IT IS FULLY ATTACHED TO THE DECK.
- 3. WHEN INSTALLING ARCH: TO AVOID POSSIBLE INJURY, ORIENT THE DIRECTION OF THE ARCH (LEANING FORWARD) PRIOR TO BEGINNING THE INSTALLATION PROCESS.
- 4. SEE BELOW FOR A LIST OF TOOLS SUGGESTED FOR THE INSTALLATION PROCESS.
- 5. IMPORTANT: REMEMBER TO CHECK ALL THE ARCH BOLTS / NUTS AFTER THE INITIAL SEA TRIAL AND RETIGHTEN AS NECESSARY

SUGGESTED TOOL LIST:

DRILL AND 3/8" DRILL BIT (TO CLEAR SEALANT

FROM HOLES)

3/8" DRIVE RATCHET

6" EXTENSION

9/16" DEEP & REGULAR SOCKET

9/16" WRENCH

SCREW DRIVER--PHILLIPS HEAD (LARGE P-4)

CAULK GUN

TUBE OF SEALANT (3M 5200)

NEVER SEIZE (BOLT LUBE)

RAZOR KNIFE

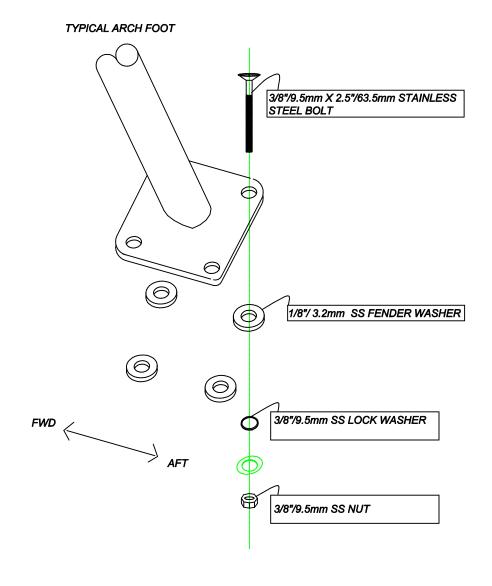
WIRE STRIPPERS/CRIMPS

RAGS

ACETONE OR LACQUER THINNER / CLEAN UP



- 1. REMOVE ALL ACCESSORIES STOWED IN THE COCKPIT LOCKERS. THIS WILL ENABLE EASIER ACCESS WHEN FASTENING THE ARCH BOLTS
- 2. WITH 3/8" DRILL BIT, REMOVE ANY SEALANT FROM PRE-DRILLED ARCH HOLES.
- 3. CLEAN AROUND THE MOUNTING HOLES USING ACETONE OR LACQUER THINNER.
- 4. APPLY A GENEROUS AMOUNT OF 3M 5200 SEALANT AT THE ARCH MOUNTING HOLE LOCATIONS ON THE FOOT DECK.
- 5. TO AVOID POSSIBLE INJURY, ORIENT THE ARCH (LEANING FORWARD) PRIOR TO PLACING IT ON THE BOAT.
- 6. BEFORE PLACING ARCH ONTO ARCH PADS, ALIGN STERNRAIL PIPES WITH RECEIVER CUPS ON ARCH AND JOIN. DO NOT BOLT UNTIL OTHER COMPONENTS ARE IN PLACE.
- 7. PLACE THE ARCH ON THE DECK OF THE BOAT. ALIGN THE ARCH FOOT HOLES ON ONE SIDE(EITHER PORT OR STARBOARD) WITH THE CORRESPONDING PRE DRILLED DECK HOLES.
- INSERT 3/8"(9.5mm) STAINLESS STEEL BOLTS THRU ALL HOLES IN ARCH FOOT AND INTO THE COAMING.
- 9. REPEAT STEP 8 WITH OTHER ARCH FOOT.
- 10. ACCESS THE UNDERSIDES OF THE DECK AT THE ARCH FOOT LOCATIONS AS FOLLOWS:
 - STBD : THRU STARBOARD SIDE GULLWING LOCKER PORT: THRU PORT SIDE GULLWING LOCKER
- 11. INSTALL THE 1/8" (3.2mm) FENDER WASHERS ON THE INSIDE OF THE COAMING AND INSTALL LOCK WASHER AND S.S. NUT ON THE BOLT WHICH HAS BEEN INSERTED. TIGHTEN BOLT COMPLETELY. (IT IS IMPORTANT TO APPLY A SMALL AMOUNT OF NEVER SEIZE TO THE BOLT TO PREVENT "GAULING" OF THE THREADS.)
- 12. BE SURE TO INSTALL THE ARCH GROUNDING WIRE, LOCÁTED IN THE STARBOARD GULLWING LOCKER.
- 13. RECHECK THE ARCH FIT ONTO THE DECK. THE HEIGHT SHOULD MEASURE AT LEAST 6' 2" (1.88)
- 14. SECURELY TIGHTEN ALL THE NUTS AND BOLTS USING A CROSS TIGHTENING PATTERN. (DO NOT FORGET TO USE A SMALL AMOUNT OF LUBRICANT FOR THE BOLTS).
- 15. CLEAN EXCESS SEALANT FROM AROUND THE ARCH FEET AND COAMING AREAS USING ACETONE OR LACQUER THINNER..
- 16. RECHECK THE BOLTS AFTER THE INITIAL SEA TRIAL AND TIGHTEN AS NECESSARY.
- 17. AFTER ARCH IS SECURE, BOLT STERNRAIL FEET TO ARCH CUPS.





AGE 45B

REEFING INSTRUCTIONS

- 1. SHACKLE TACK REEF BLOCKS TO FIRST AND SECOND REEF TACK CRINGLES.
- 2. RUN BOTH REEFING LINES AS ILLUSTRATED IN THE BOOM & REEF LAYOUT. BOTH PORTIONS OF THE REEFING LINE LEADING TO THE REEF TACK BLOCK MUST RUN THROUGH THE GOOSE NECK ON THE AFT OF THE SPAR. THE SHORTER REEF LINE WILL BE USED ON THE FIRST REEF (STARBOARD SIDE, GREEN) THE LONGER REEF LINE ON THE SECOND REEF (PORT SIDE, RED.)
- 3. RAISE THE MAIN SAIL.
- 4. EASE THE MAINSHEET AND VANG.
- 5. LOWER THE MAIN SAIL TO APPROXIMATELY THE FIRST REEF POSITION.
- 6. TAKE UP THE SLACK IN THE FIRST REEF LINE UNTIL THE TACK AND THE CLEW ARE DOWN TO ABOUT 2" ABOVE THE BOOM.
- 7. ADJUST THE MAIN HALYARD SO THAT THE TACK REEF BLOCK IS NOT CONTACTING THE GOOSE NECK ON THE FRONT OF THE SPAR AND IS APPLYING TENSION TO THE LUFF OF THE MAIN ABOVE THE REEF. NOT BELOW. THERE WILL BE AP-

- PROXIMATELY 6" (150mm) OF STRETCH IN THE MAIN LUFF AND MAIN HALYARD WHEN THE REEFING LINE IS TENSIONED, SO MAKE SURE THAT THIS IS ALLOWED FOR WHEN ADJUSTING THE MAIN HALYARD TO LOCATE THE TACK REEF BLOCK.
- 8. ALSO, TENSION THE REEF LINE WITH THE APPROPRIATE SELF-TAILING WINCH UNTIL THE CLEW REEF CRINGLE IS BROUGHT DOWN TO THE BOOM.
- 9. CONFIRM THAT THE TACK REEF BLOCK IS STILL CLEAR OF THE TACK SHACKLE AND THAT ONLY THE MAIN LUFF ABOVE THE REEF CRINGLE IS TENSIONED, NOT THE LUFF BETWEEN THE CRINGLE AND THE TOP STACKED SAIL SLIDE. EASE THE REEF LINE AND READJUST THE HALYARD IF NECESSARY.
- 10. MARK THE HALYARD AT THE STOPPER WITH A 1"
 (25mm) SINGLE BAND OF INDELIBLE MARKER INK. BY
 DROPPING THE HALYARD TO THIS MARK EVERY TIME A REEF
 IS REQUIRED THE HALYARD IS AUTOMATICALLY IN THE CORRECT POSITION FOR THE REEF.
- 11. REPEAT THE PROCEDURE FOR THE SECOND REEF, USING DOUBLE BANDS TO MARK THE HALYARD IN THE CORRECT POSITION.

REEFING PROCEDURE

- 1. HEAD UP INTO THE WIND.
- 2. EASE THE MAINSHEET AND VANG.
- 3. CHECK THE TOPPING LIFT FOR ADEQUATE BOOM SUPPORT.

- 4. LOWER THE MAIN HALYARD TO THE APPROPRIATE MARK, AND SNUB THE LINE WITH THE STOPPER.
- 5. TENSION THE REEFING LINE WITH THE SELF-TAILING WINCH UNTIL THE REEF CLEW IS BROUGHT DOWN TO THE BOOM. APPLY STOPPER AND TENSION THE MAIN HALYARD BACK UP. EASE THE TOPPING LIFT. (IF NEEDED)

SHAKING OUT A REEF

- 1. HEAD UP INTO THE WIND.
- 2. EASE THE MAINSHEET AND VANG. RELEASE THE TENSION ON THE TOPPING LIFT. (IF NEEDED)
- 3. RELEASE THE REEF STOPPER AND REMOVE REEF LINE FROM WINCH.

- 4. TENSION THE MAIN HALYARD TO RAISE SAIL, MAKING SURE REEF LINES RUN FREELY WHILE SAIL IS BEING RAISED. APPLY STOPPER TO MAIN HALYARD.
- 5. RE-TENSION VANG AND MAINSHEET. EASE THE TOPPING LIFT. (IF NEEDED)

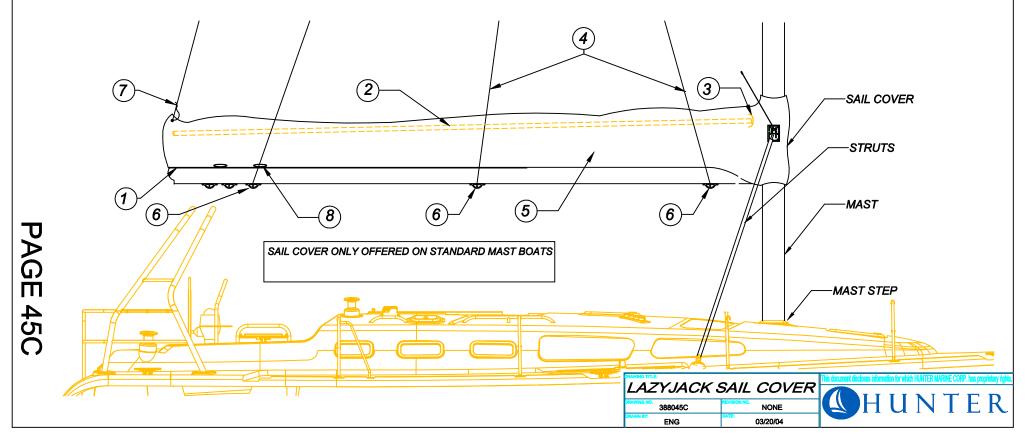


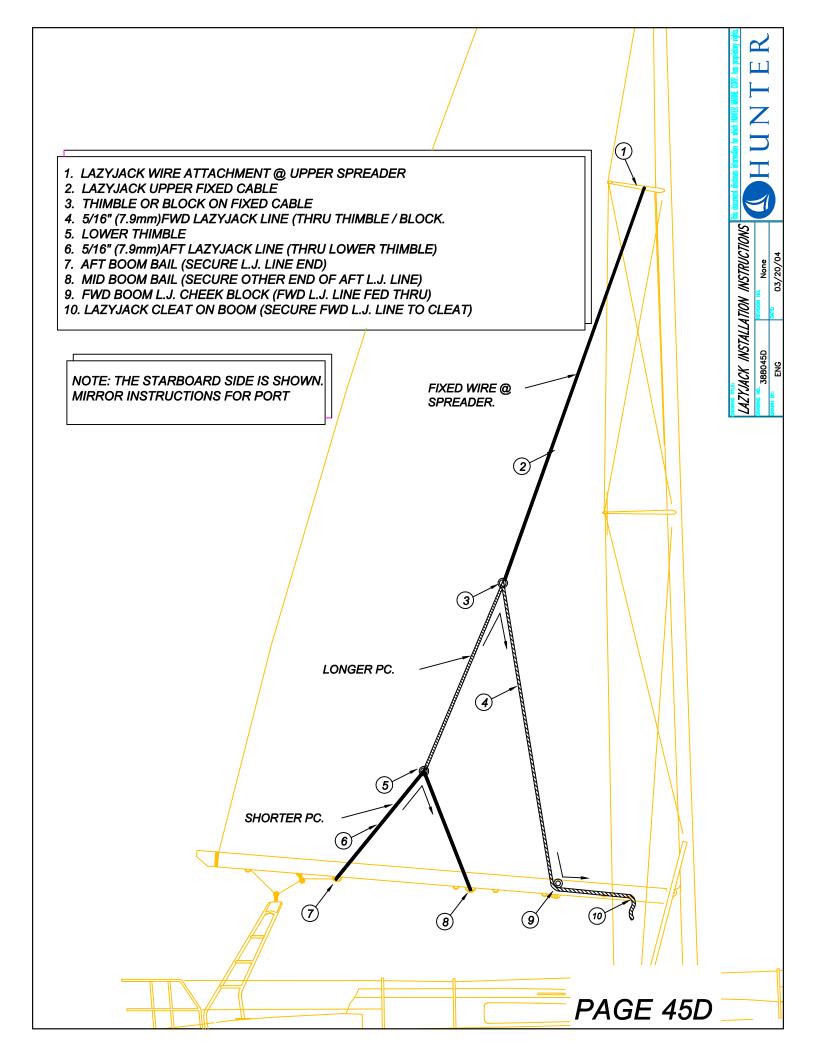
SLIDE THE BOLTROPE ON THE TWO HALVES OF THE COVER INTO THE BOLTROPE TRACKS ①ON BOTH SIDES OF THE BOOM. START FROM THE AFT END AND MAKE YOUR WAY FORWARD.

INSTALL THE PVC BATTENS(2) INTO EACH HALF OF THE SAIL COVER. THERE ARE POCKETS(3) THAT OPEN TOWARDS THE FRONT, ON THE INSIDE OF THE COVER. SLIDE THE BATTENS INTO PLACE FROM THE FRONT, AND ROLL THE INSIDE LIP OF THE POCKET BACK IN ORDER TO HOLD THE BATTENS STATIONARY.

FEED THE LAZYJACK LINES 4 OVER THE SAIL COVER 5 AND DEAD END THE LINES TO THE BAILS ON THE UNDERSIDE OF THE BOOM 6.

TIE THE AFT END OF THE SAIL COVER UP TO THE TOPPING LIFT LINE USING THE PIECE OF STRING PROVIDED ①. USE HALF HITCH KNOTS TO SECURE THE COVER IN PLACE AT THE OUTER END OF THE BOOM. THE REEF LINES RUN OUT THROUGH THE COVER SLOTS® AND TIE OFF.





HUNTER 38 CONVENTIONAL RUNNING RIGGING SPECIFICATIONS

		Selden Mast #: RRIG-0056S							
OPT/STD ITEM		QTY Line Size		Line Type	Color	End 1	Len	gth	End 2
1 STD	MAIN HALYARD	1	12mm (1/2")	32/3 pl	BLUE	307-047 SHACKLE /KNOT	39 m	128 ft	BARE
2 STD	JIB HALYARD	1	12mm (1/2")	32/3 pl	RED	307-021 SHACKLE /KNOT	37 m	121 ft	BARE
3 STD	MAIN TRAVELER LINE	2	10mm (5/16")	16/16 pl	WHITE	SMALL EYE	7.9 m	26 ft	BARE
4 STD	MAINSHEET	1	12mm (1/2")	16/16 pl	BLUE	SMALL EYE	26 m	85 ft	BARE
5 STD	REEFING LINE #1	1	12mm (1/2")	16/16 pl	GREEN	BARE	25.9 m	85 ft	BARE
6 STD	REEFING LINE #2	1	12mm (1/2")	16/16 pl	RED	BARE	33.5 m	110 ft	BARE
7 STD	JIB SHEET	2	12mm (1/2")	16/16 pl	RED	BARE	14.5 m	48 ft	BARE
8 OPT	CRUISING SPINN. SHEET	2	10mm (3/8")	32/3 pl	WHITE	BARE	24 m	79 ft	BARE
9 OPT	SPINNAKER HALYARD	1	12mm (1/2")	16/16 pl	RED	307-338 SHACKLE /KNOT	36 m	121ft	BARE
10 OPT	RODKICKER TACKLE	1	12mm (1/2")	16/16 pl	WHITE	SMALL EYE	9 m	30 ft	BARE
11 STD	LAZY JACK WIRE	2	4 MM (5/32)	PLASTIC COATED 7X7	WHITE	307-015 SHACKLE	5.5 m	18 ft	Thimble Block
12 STD	FIXED LAZY JACK LINE	2	10mm (3/8)	16/16 pl	WHITE	BARE	6 m	20 ft.	BARE
13 STD	BOOM TOPPING LIFT	1	10mm (3/8)	16/16 pl	WHITE	307-013 SHACKLE/EYE	35 m	115ft	BARE
14 STD	ADJUSTABLE LAZY JACK LINE	2	10mm (3/8)	16/16 pl	WHITE	NYLON THIMBLE EYE	6.7 m	22 ft.	BARE

HUNTER 38 FURLING RUNNING RIGGING SPECIFICATIONS

RUNNING RIGGING SPECIFICATIONS

Selden Mast # RRIG-0055

	_		1						
OPT/STD	ITEM	QTY	Line Size	ne Size Line Type Color End 1		Length		End 2	
1 STD	JIB HALYARD	1	12mm (1/2")	32/3 pl	RED	307-047 SHACKLE / KNOT	34 m	112 ft	BARE
2 STD	MAIN HALYARD	1	10mm (3/8")	DYNEEMA	BLUE	EYE	38 m	125 ft	BARE
3 STD	MAIN TRAVELER LINE	2	8mm (5/16")	16/16 pl	WHITE	SMALL EYE	7.9 m	26 ft	BARE
4 STD	MAINSHEET	1	12 mm (1/2")	16/16 pl	BLUE	SMALL EYE	26 m	80ft	BARE
5 STD	BOOM TOPPING LIFT	1	10mm (3/8")	16/16 pl	WHITE	307-046 SHACKLE/ EYE	33 m	108 ft	BARE
6 STD	JIB SHEET	2	12 mm (1/2")	16/16 pl	RED	BARE	14.5 m	48 ft	BARE
7 OPT	CRUISING SPINN. SHEET	2	10 mm (3/8")	32/3 pl	WHITE	BARE	24 m	79 ft	BARE
8 OPT	SPINNAKER HALYARD	1	12mm (1/2")	16/16 pl	RED	307-338 SHACKLE / KNOT	36 m	121ft	BARE
9 OPT	RODKICKER TACKLE	1	12mm (1/2")	16/16pl	WHITE	EYE	9m	30ft	BARE
10 STD	MAINSAIL OUTHAUL	1	10mm (3/8")	16/16pl	WHITE	EYE	24m	79ft	BARE
11 STD	MAINSAIL FURLING LINE	1	10mm (3/8")	16/16 pl	YELLOW	BARE	13.5 m	44ft	BARE

H38 B&R RIG WITH STRUTS DESCRIPTION

The B&R rig, utilized on the Hunter 38, eliminates the need for a backstay to allow for a more efficient mainsail shape. Fixed backstays are commonly being designed out of today's performance-oriented boats to allow the mainsail to incorporate a full roach design - a more aerodynamic shape both for racing and cruising performance.

To accomplish this, the B&R rig has 30 degree swept spreaders, creating 120 degrees between each rigging point. This tri-pod arrangement has excellent strength for sailboat rigs, and has been used for years to support huge radio towers.

The latest advancement to the B&R rig is the addition of mast struts. These struts stabilize the lower section of the mast, allowing compression loads to be spread, reducing the point loading at the mast base. They also create a strong point for the boom and spinnaker pole loadings. The struts function also allow us to use a smaller mast section reducing weight aloft to decrease the heeling and pitching moments, making for a more comfortable ride. Additionally, they provide a secure handhold when going forward.

The struts perform an important structural function, therefore never sail your boat without the struts properly fitted. If your H38 is equipped with the in-mast furling option, the mast is a larger section size and the struts are not utilized.

Additional support is given to the B&R rig (and is unique to it) with the addition of reverse diagonal rigging. For example, the diagonals that you see beginning by the top of the mast strut, ending at the tip of the spreader, supports and stabilizes the upper

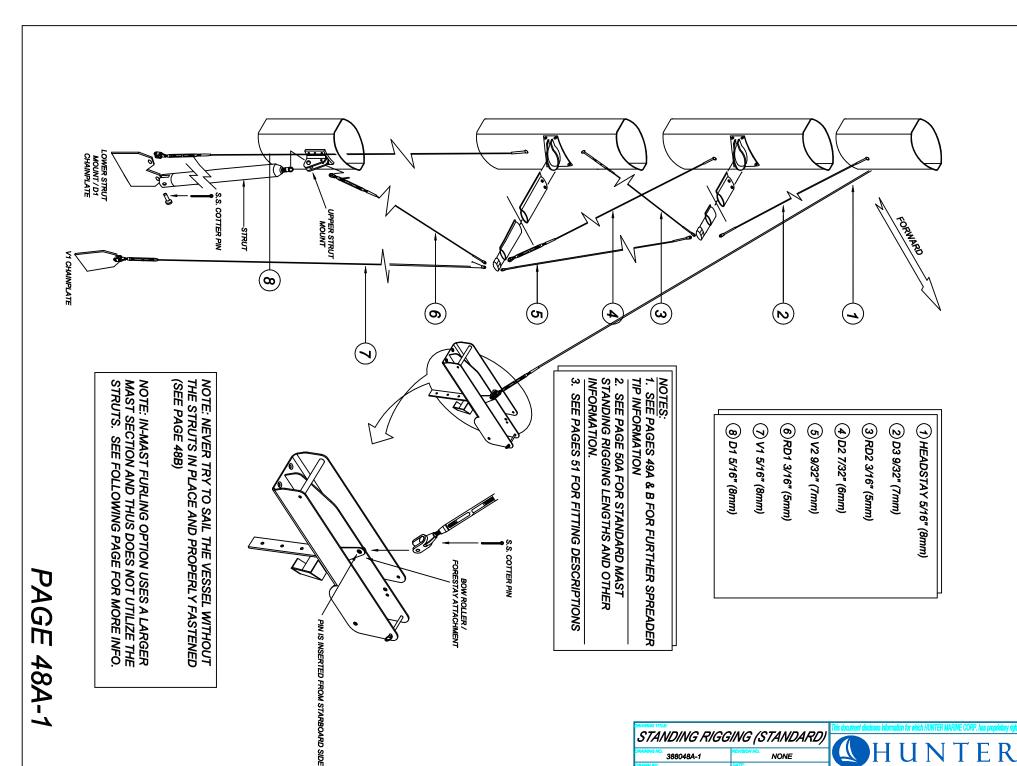
section of the mast as it creates a triangle with the upper shroud.

The B&R rig is designed to be pre-bent to further add rigidity to the mast section and eliminate the need for adjustable rigging (like backstay adjusters). This design should prove more reliable than a rig with adjustable backstays or runners, as there is less chance for error.

The large main, small jib, sail plan on the H38 also eliminates the need for large overlapping headsails (genoas), as the driving power comes from the much improved shape and size of the mainsail. This allows for an easier tacking small jib, creating good performance and more comfortable sailing, as it is less work for the crew.

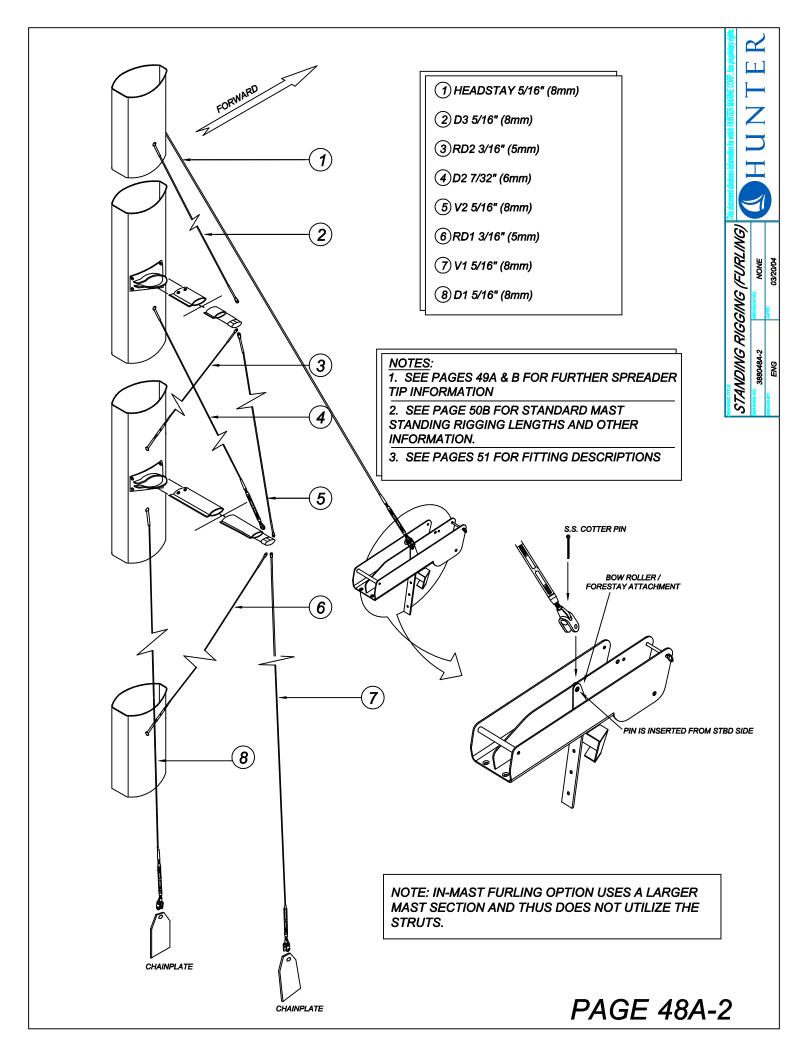
As the large main is creating additional mainsheet and leach loading, Hunter has included a cockpit arch whereby the mainsheet and leech loads are directed to the strong part of the boom (the outboard end) and is located at the heaviest loading point of the mainsail. The cockpit arch serves addition safety and comfort functions as handholds and cockpit canvas attachment points.

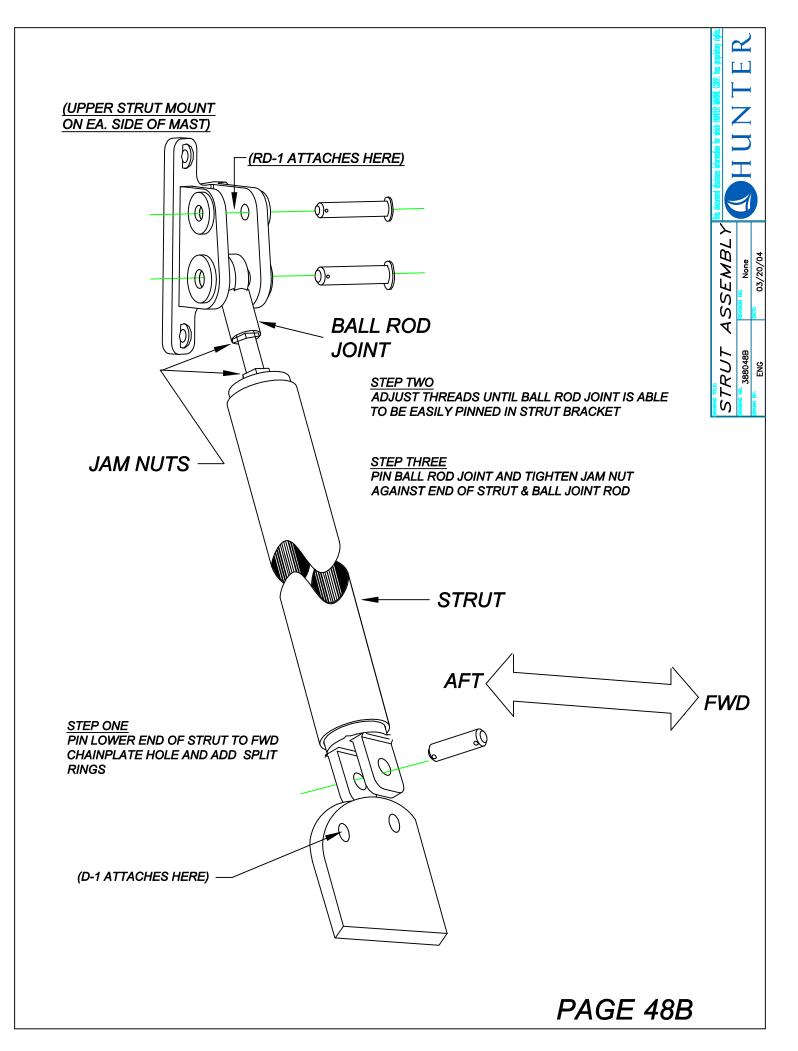
B&R rigs have been used on thousands of sailboats, and we are proud to incorporate this successful design on your new Hunter.

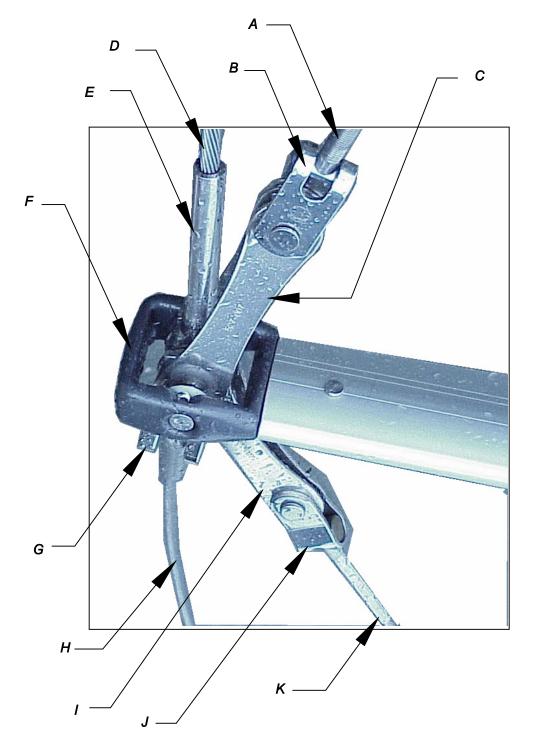


ENG

03/20/04







D2 stem T jaw toggle V1 G H Α jaw toggle B C D link plates link plates V2 jaw toggle RD1 stem T E F Κ marine eye spreader tip casting

A D3 marine eye

B jaw toggle

C 1/2" (1.27cm) pin

D spreader tip casting

E 3/8" (.95cm) pin

F link plates

G

G marine eye stem

H spreader tip casting fastener

HUNTER 38 CONVENTIONAL STANDING RIGGING

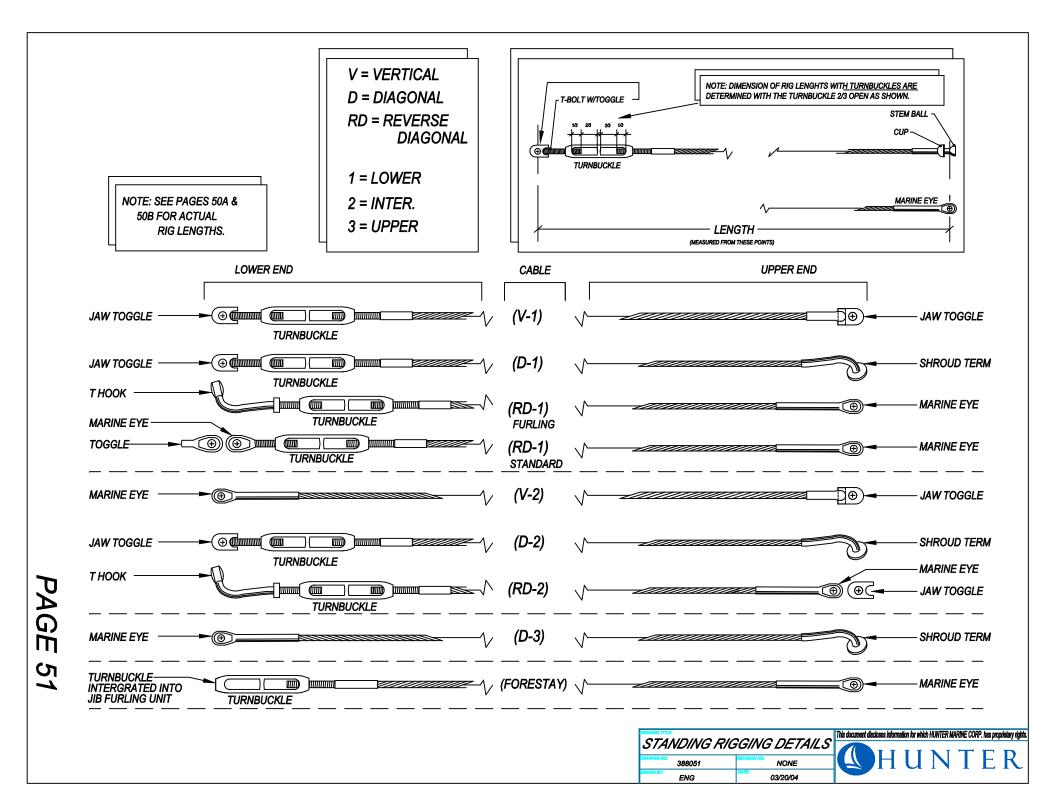
	ITEM QTY WIRE SIZE			SIZE	FITTINGS	OVERALL LENGTH		
1	D3	2	9/32"	7 mm	T-TERMINAL 308-325	12 ft 10 7/8"	3935 mm	
					FORK 308-315-01			
2	V2	2	9/32"	7 mm	EYE 308-363	13 ft 5/8"	3980 mm	
					EYE 308-363			
3	D2	2	7/32"	6 mm	STEMBALL 601-003-98	13 ft 6 1/8"	4120 mm	
					STD/FORK TB 174-323-60			
4	RD2	2	3/16"	5 mm	FORK 308-313-01	12 ft 11"	3940 mm	
Ì			0, 10		STD/T TB 174-473-21	12 13 11		
5	V1	2	5/16"	8 mm	FORK 308-316-01	21 ft 11 3/4"	6700 mm	
					STD/TGL5/8 TB 174-326-59			
6	D1	2	5/16"	8 mm	STEMBALL 308-514	21 ft 11 1/4"	6690 mm	
U	וט		0/10	0 111111	STD/TGL5/8TB174-326-59	211011174	0030 111111	
7	RD1	2	3/16"	5 mm	FORK 308-313-01	15 ft 1 1/8"	4600 mm	
					STD/TGLE TB 174-323-59			
8	FORESTAY	1	5/16"	8 mm	FURLEX 208-15	48 ft 10 5/8"	14900 mm	
					031-021-67			
			•	•	SRIG-0056			

- 1. ALL ADJUSTABLE RIGGING IS DIMENSIONED WITH TURNBUCKLES 2/3 OPEN.
- 2. LENGTHS <u>DO NOT</u> INCLUDE SPREADER TIP LINKAGE.

HUNTER 38 FURL STANDING RIGGING

	ITEM	QTY	WIR	E SIZE	FITTINGS	OVERALL LENGTH		
1	D3	2	5/16"	8 mm	T-TERMINAL 308-326	15ft. 9 3/4"	4820 mm	
					FORK 308-316-01			
2	V2	2	5/16"	8 mm	EYE 308-364	15ft. 3"	4650 mm	
					EYE 308-364			
3	D2	2	7/32"	6 mm	T-TERMINAL 308-324	14ft. 9 3/8"	4505 mm	
J	DZ		1702	0 111111	STD/TGLE TB 174-323-60	1411. 3 0/0	4000 IIIII	
4	RD2	2	3/16"	5 mm	FORK 308-313-01	15ft. 1"	4595 mm	
4	ND2		3/10	3 111111	STD/T TB 174-473-21	1311. 1	4555 11111	
1			= /4 0 !!		E001/ 000 010 01	406: 441		
5	V1	2	5/16"	8 mm	FORK 308-316-01	16ft. 11"	5160 mm	
					STD/TGLE TB 174-326-59			
6	D1	2	5/16"	8 mm	T-TERMINAL 308-326	16ft. 2"	4930 mm	
					STD/TGLE TB 174-326-59			
7	RD1	2	3/16"	5 mm	FORK 308-313-01	14ft. 1 3/4"	4310 mm	
		_			STD/T TB 174-473-21			
8	FORESTAY	1	5/16"	8 mm	FURLEX 208-15	48ft. 10 5/8"	14900 mm	
٠		·	3, 10	01	031-021-67	10.11.10.00		
				•	SELDEN MAST SRIG-0055	•		

- 1. ALL ADJUSTABLE RIGGING IS DIMESIONED WITH TURNBUCKLES 2/3 OPEN.
- 2. LENGTHS <u>DO NOT INCLUDE SPREADER TIP LINKAGE</u>.



TUNING THE H38 B&R RIG

The easiest method for tuning the B&R rig is to perform step one as follows before the mast is stepped, with it lying aft side down on two sawhorses. Begin with all rigging slack. If the mast is already stepped, loosen all the rigging, and then proceed to step one.

- 1. Start with all the rigging slack. Then induce the mast bend by tightening the reverse diagonals (diamonds). Measure the bend by tensioning a line or the main halyard between the masthead and the gooseneck. The maximum amount of bend should be no more than 8" [203mm] for the standard rig and no more than 2" [50mm] for the furling mast. Measured perpendicular from the aft face of the mast to the halyard at the deepest part of the bend. It can be less than that based on the sail shape and your own preference. The bend should also be evenly distributed along the mast to give a smooth shape. Keep in mind that bending a furling mast may make it more difficult to furl and will not do much to flatten the sail as in a standard rig. It is very important that the mast also be straight from side to side at this time. Tighten or loosen the reverse diagonals to achieve this.
- 2. Step the mast with all shrouds attached but with the turnbuckles completely loosened (if the mast was not already stepped).
- 3. Attach the jib halyard to a cleat on the bow to support the mast in a raked position (the masthead should be about 2'-0" [~6cm] behind the step). Attach the verticals and tighten them until you can just see the hole for the cotter pin in the turnbuckle. Tighten the jib halyard until you can attach the forestay. At this point the masthead should be raked so that a weight hung on the main halyard hangs about 1' behind the mast step.
- 4. Use the main halyard to check that the mast is centered from side to side. Pull it tight and mark the halyard next to the verticals chainplate. Now do the same

- to the other side to see if the marks line up. If not, tighten and/or loosen the verticals until the marks line up. Once the masthead is centered, begin tightening the verticals until the turnbuckles are approximately half closed. While tightening the verticals you may notice the bend in the mast increasing. Now you can tighten the lowers, which will tend to straighten the lower part of the mast. Be sure to tighten port and starboard sides evenly.
- 5. Now you should tighten the headstay until it is approximately half closed as well. This should induce the appropriate amount of headstay tension. Never use anything more than a pair of wrenches to tighten your rigging. If you use an extended piece of pipe on the handle of a wrench you can over tighten the rigging and do damage to the mast or rigging.
- 6. On the Hunter 38 it is necessary to go up the mast in a bosun's chair to tighten the number 2 diagonal shroud (D2 or intermediate shroud). Always use caution when "going aloft". You should always use a mountain climbing harness or Bosun's Chair intended for this use. Always tie into the harness with the halyard using a bowline and then secure the shackle as a back up as the knot is more reliable than a mechanical fastener. The person hoisting you aloft should keep the halyard stopper closed to prevent falls. Good communication between the two of you is also important. Tighten the D2 until it has just become tight and then add two complete turns. While at the first spreader, look up the back of the mast to see if it is straight (rather than bent from side to side). If it is not straight then adjust the appropriate D2 to straighten it.
- 7. Have the person on deck carefully lower you. They should keep the halyard wrapped at least twice around the winch and should always have one hand able to stop the halyard from running free. Once on deck look up the back of

TUNING THE H38 B&R RIG

the mast and see if it is straight (rather than bent from side to side). If not then adjust the lowers (D1) until it is.

- 8. If you have the standard rig you need to attach the struts at this time. Attach the lower end of the strut to the smaller hole in the chainplate. Adjust the length by turning the ball joint bearing in the upper end of the strut until the holes in the pin can be attached. It is normal to have some play between the strut and the chainplate and strut bracket
- 9. The final test is to go sailing in 10-15 knots of wind. If when sailing upwind, the shrouds on the leeward side are slack then tighten them to remove about half the slack keeping note of the number of turns. Then tack and do the same to the other side. Do this until you are happy with the tension and the leeward side does not get loose when the boat is heeled. Now sight up the mast to be sure it is still relatively straight from side to side. If it is not then adjust to appropriate rigging to correct it. For example: if the mast is straight until the upper spreader and then hooks to the windward side then you will have to revisit steps 6 and 7 above. Remember to always tighten the leeward shroud, tack and tighten the new leeward shroud the same amount. This prevents damage to the turnbuckles and is also much easier to

- do. Keep in mind it is also possible to have something too tight such as a diagonal shroud.
- 10. At this point you should have adequate headstay tension. The sails are built for an average of 14" [350mm] of headstay sag, possibly more or less depending upon light or heavy air. The bend in the standard mast should be about 4" [100mm] and 1" [25mm] in the furling mast and it should be nearly straight from side to side when sailing upwind. If any of these are not true then revisit the appropriate step above to correct it. If the sag in the headstay is too much then adding tension to the verticals will fix it.
- 11. Once the rig is tuned you should make sure to add the cotter pins to all the rigging bending back the ends and taping them to prevent snagged lines, sails and fingers.

Remember that rigging, like everything else, can age. As it gets older it may need to be replaced. The frequency for which this becomes necessary depends on the climate and conditions in which the boat is sailed. For example: if you sail in the Caribbean it should be replaced every 2-3 years compared to every 10 for the great lakes. You should consult a professional rigger for advice.

