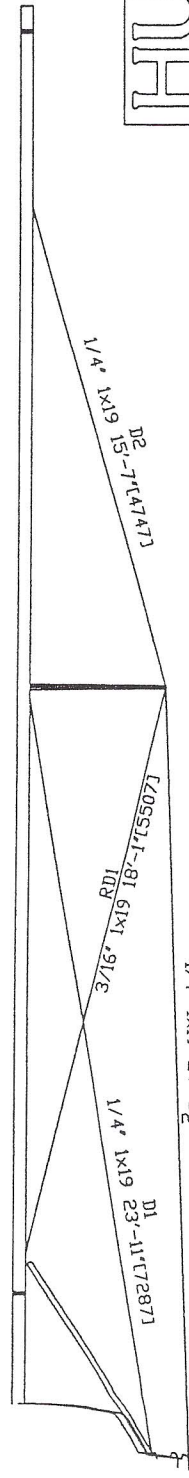
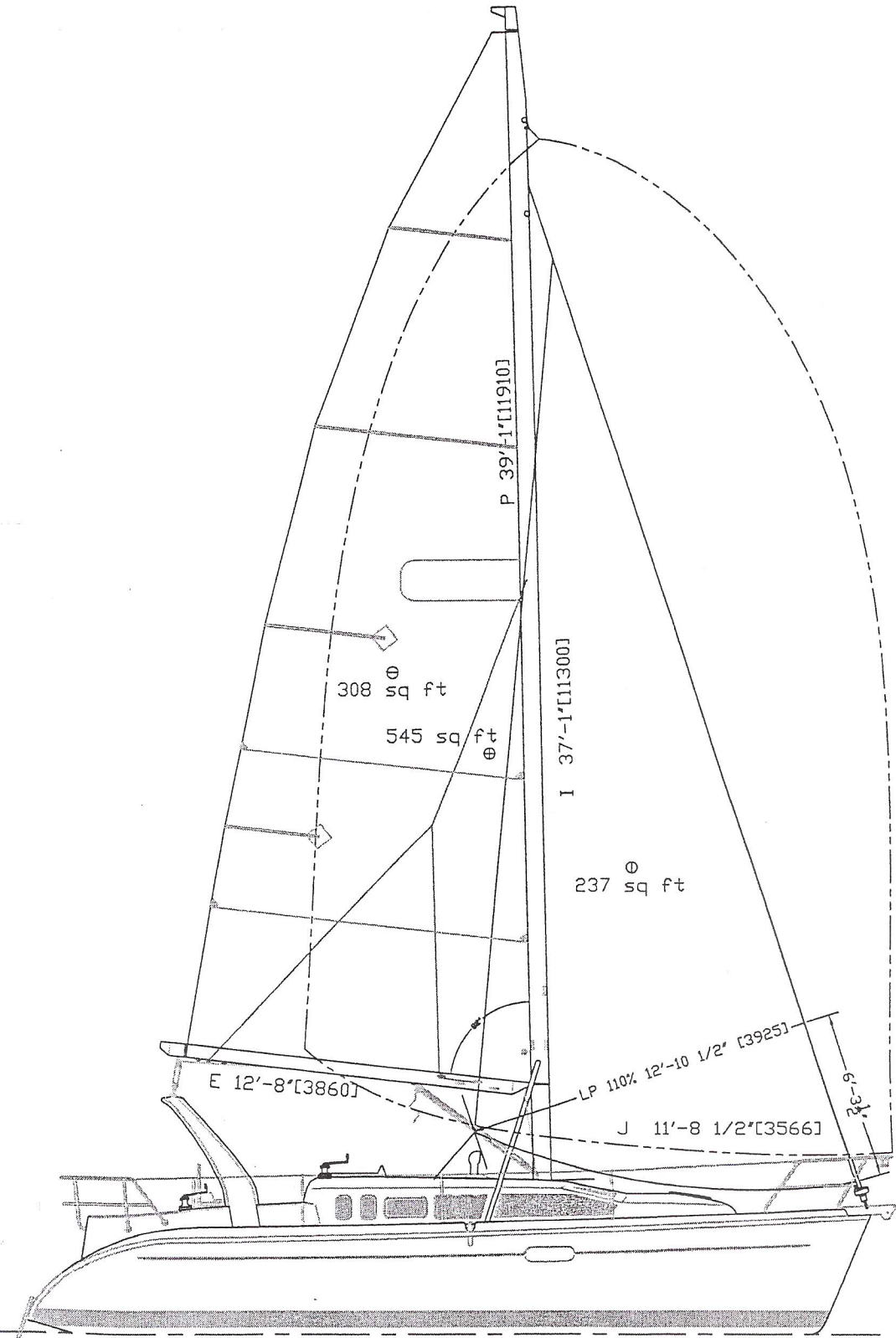


IMPORTANT!
 USE CAUTION WHEN EASING LAZY JACK TENSION
 TO PREVENT BOOM FROM STRIKING ARCH

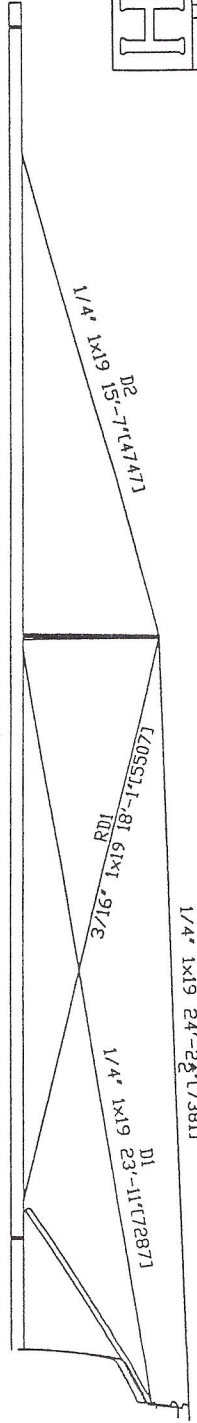
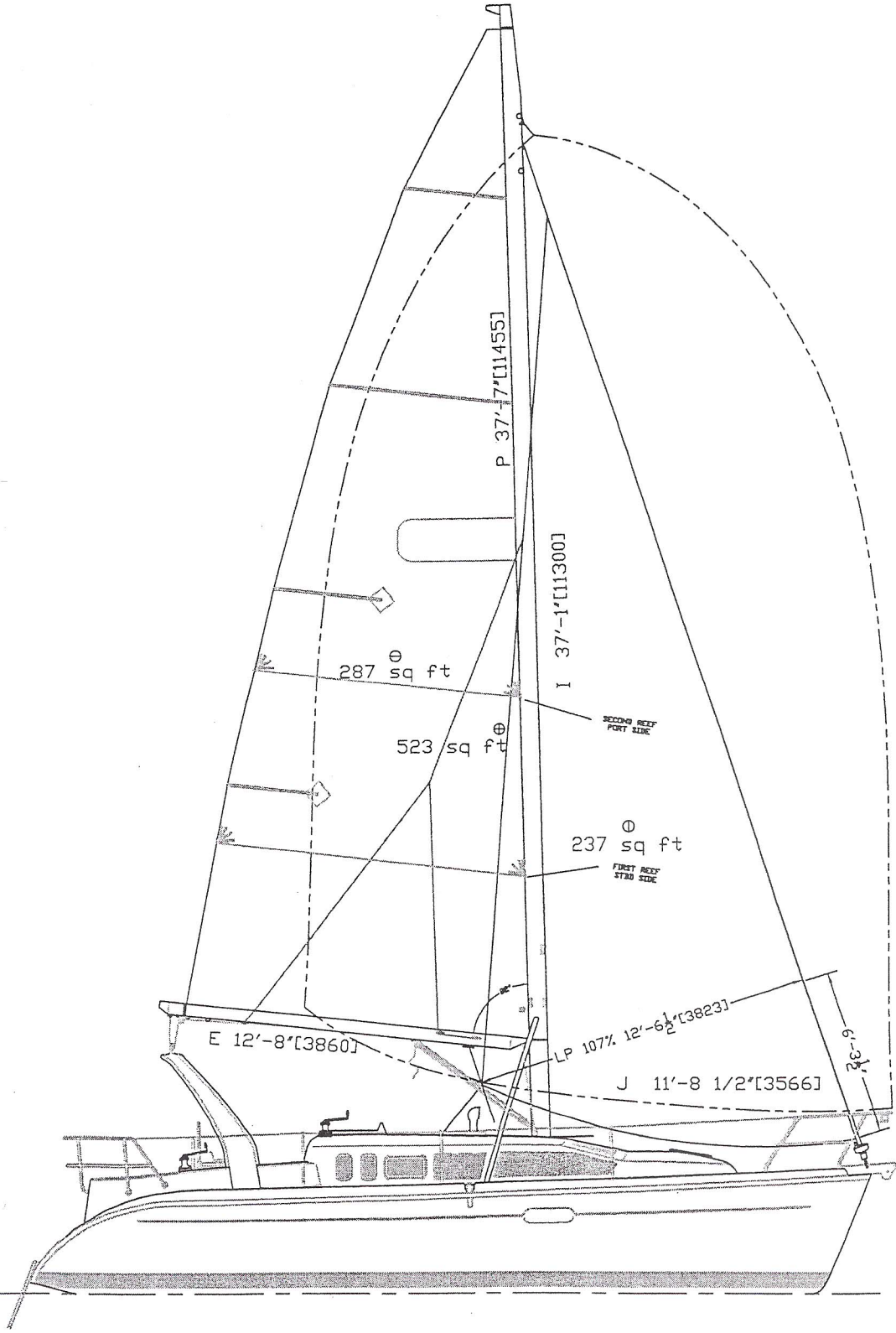
HUNTER
 H-310 SAILPLAN STD.
 DRAWING # 3108036

MAST CLEARANCE 39'03"±4"



IMPORTANT!
 USE CAUTION WHEN EASING LAZY JACK TENSION
 TO PREVENT BOOM FROM STRIKING ARCH

—MAST CLEARANCE 48'-6" [14787]

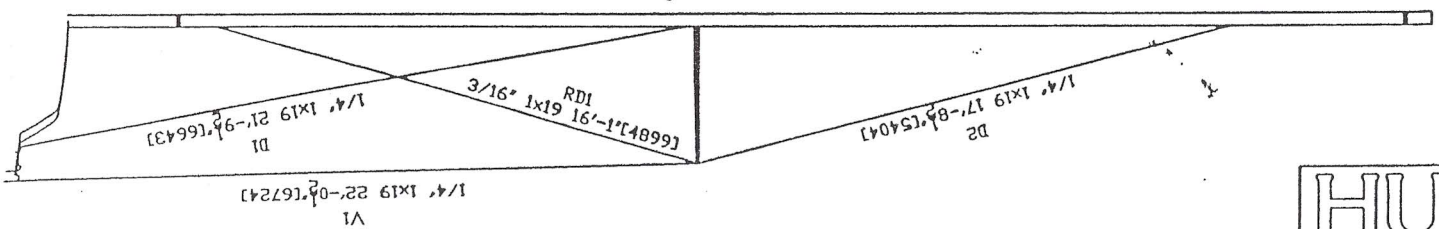
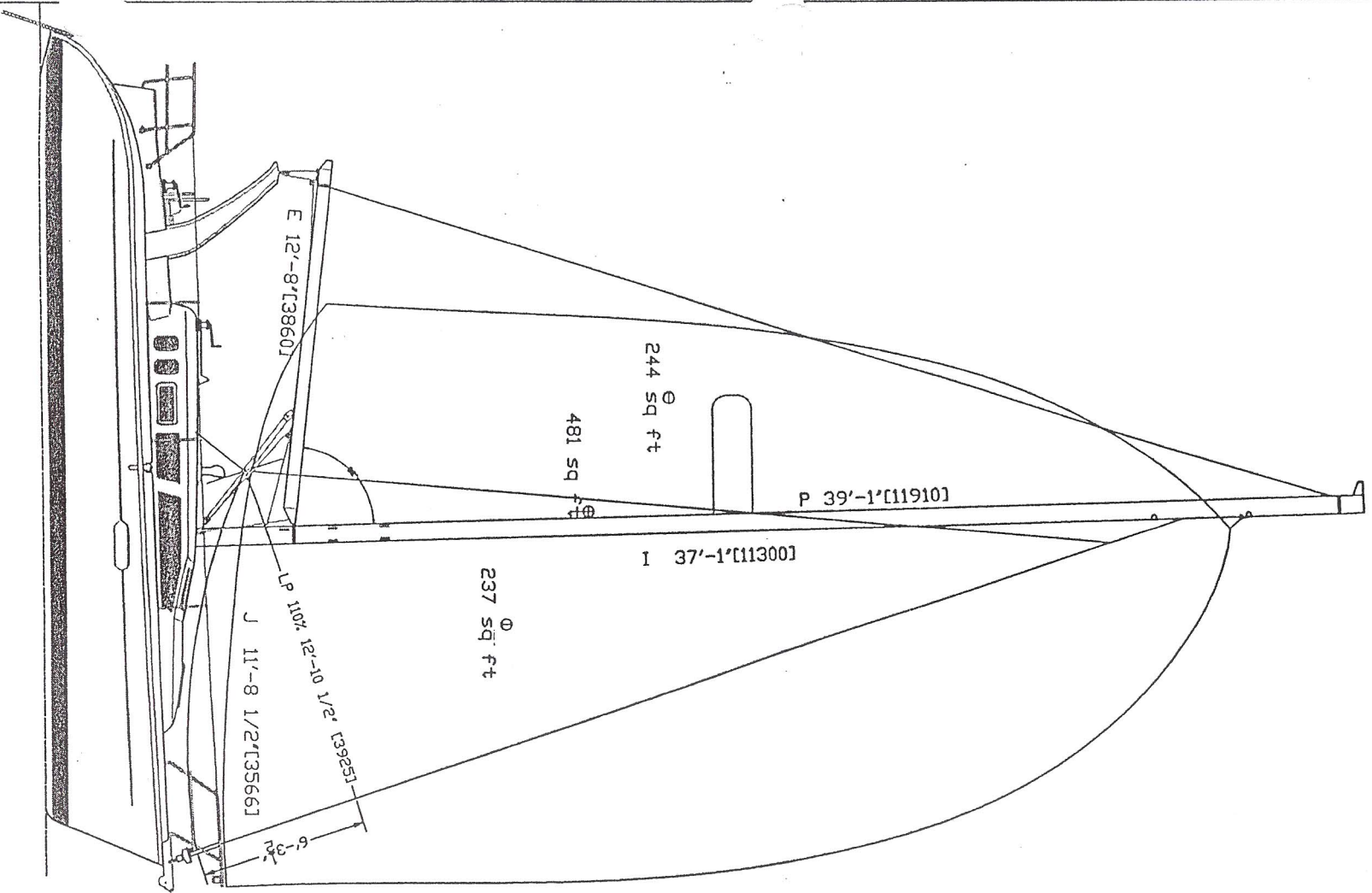


HUNTER
 H-310 SAILPLAN STD.
 DRAWING # 3108036A

STANDARD SAILPLAN

1/4" 1x19 15" [14747]
 D2 7'-1" [14747]
 RD1 3/16" 1x19 18'-1" [55507]
 D1 1/4" 1x19 23'-11" [17287]
 1/8" 1/2" 2'-4" 6x19 24'-2" [17381]

MAST CLEARANCE 50' [152441]



FURLING SAILPLAN (OPTIONAL)


HUNTER 
 H-310 FURLING SAILPLAN
 DRAWING # 3108036B

BUILDER'S INFORMATION PLATE
HUNTER MARINE CORPORATION


H310

HUNTER MARINE CORP.

CE 0609 B



MAXIMUM

10  +  = 1250kg

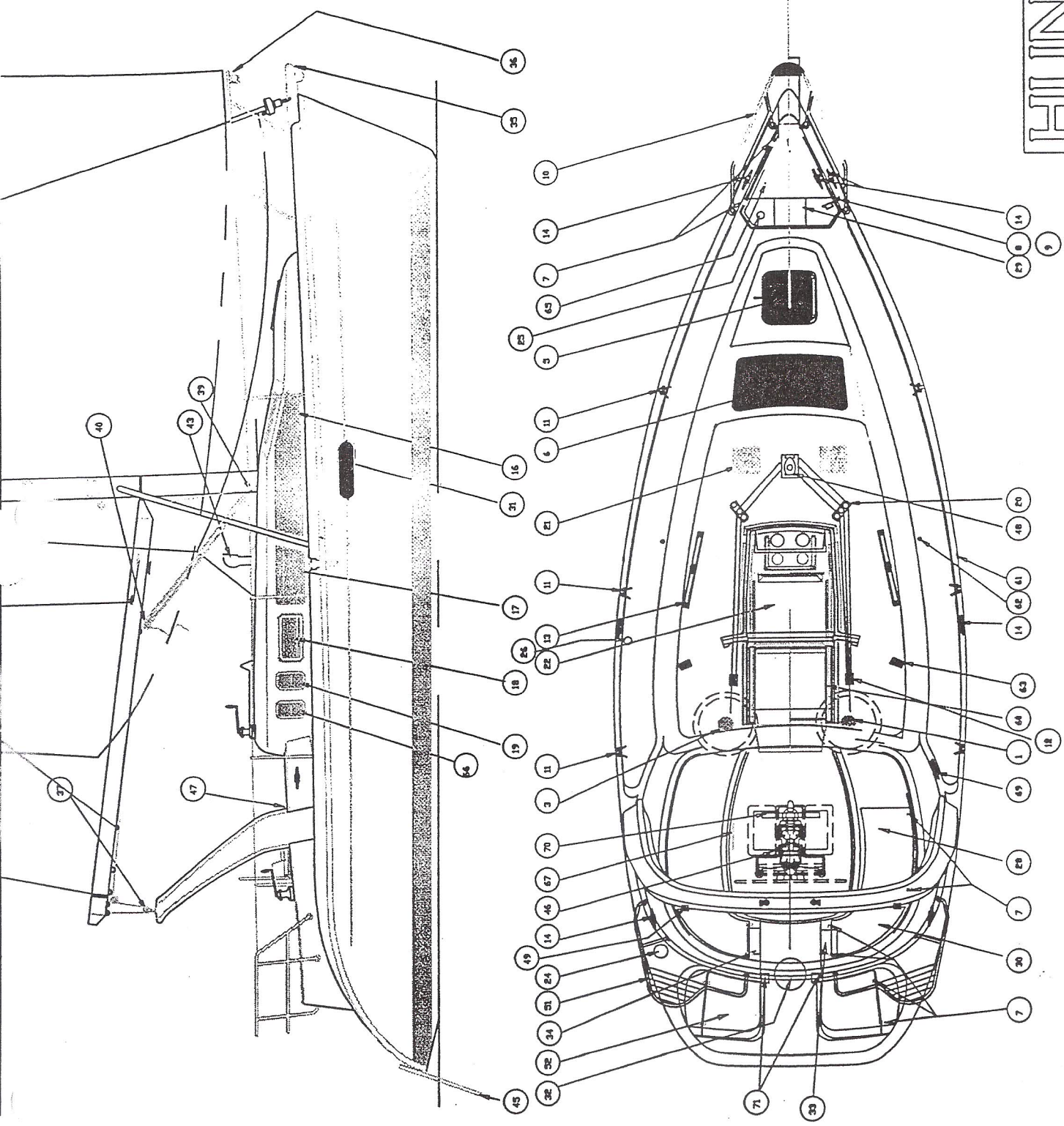
LIGHTSHIP DISPLACEMENT = 3887Kg (8551Lb)
FULL LOAD DISPLACEMENT = 5137Kg (11,301Lb)
SINK @ FULL LOAD = 82mm (3.24")

EACH HUNTER 310 MODEL WITH THE CE MARK IS AND WILL CONTINUE TO BE IDENTICAL TO THE INDIVIDUAL UNIT OF THAT MODEL WHICH WAS OFFICIALLY INSPECTED AND APPROVED

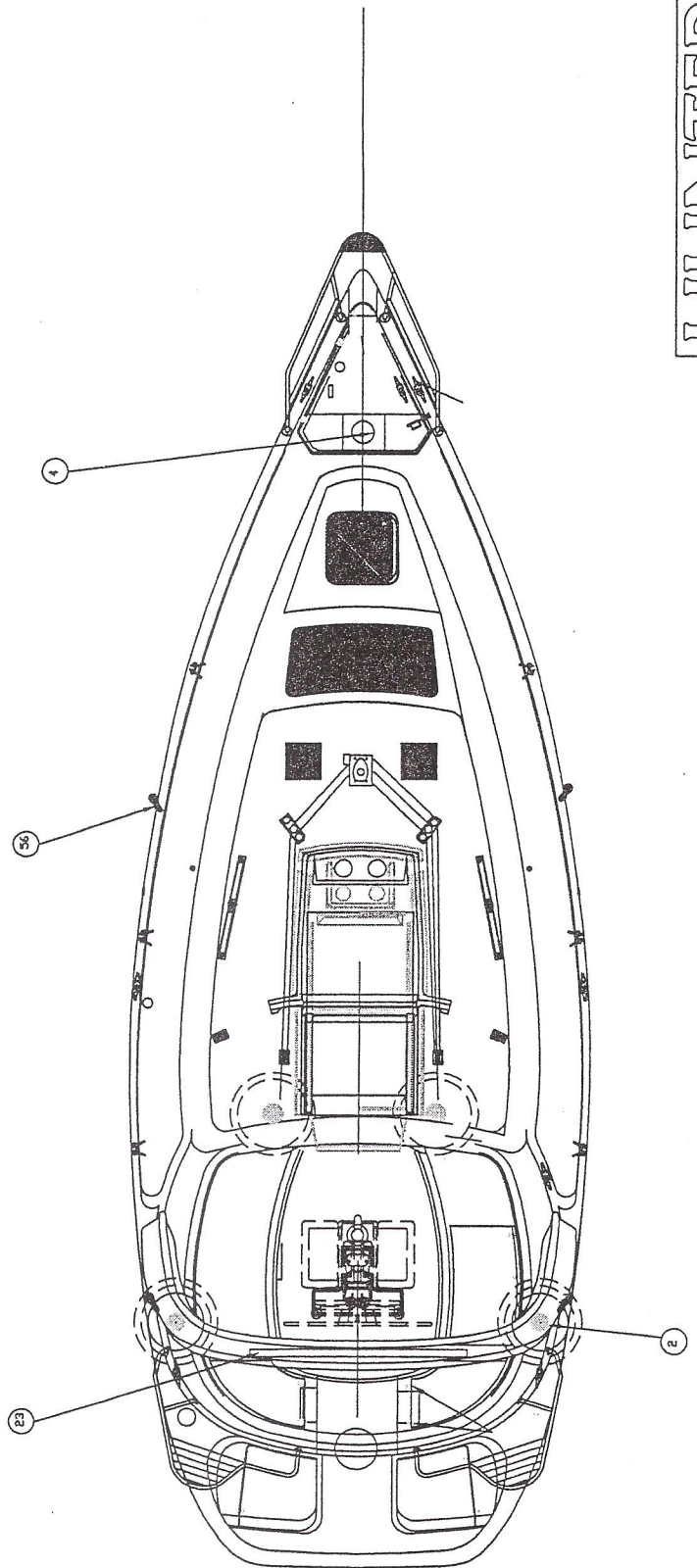
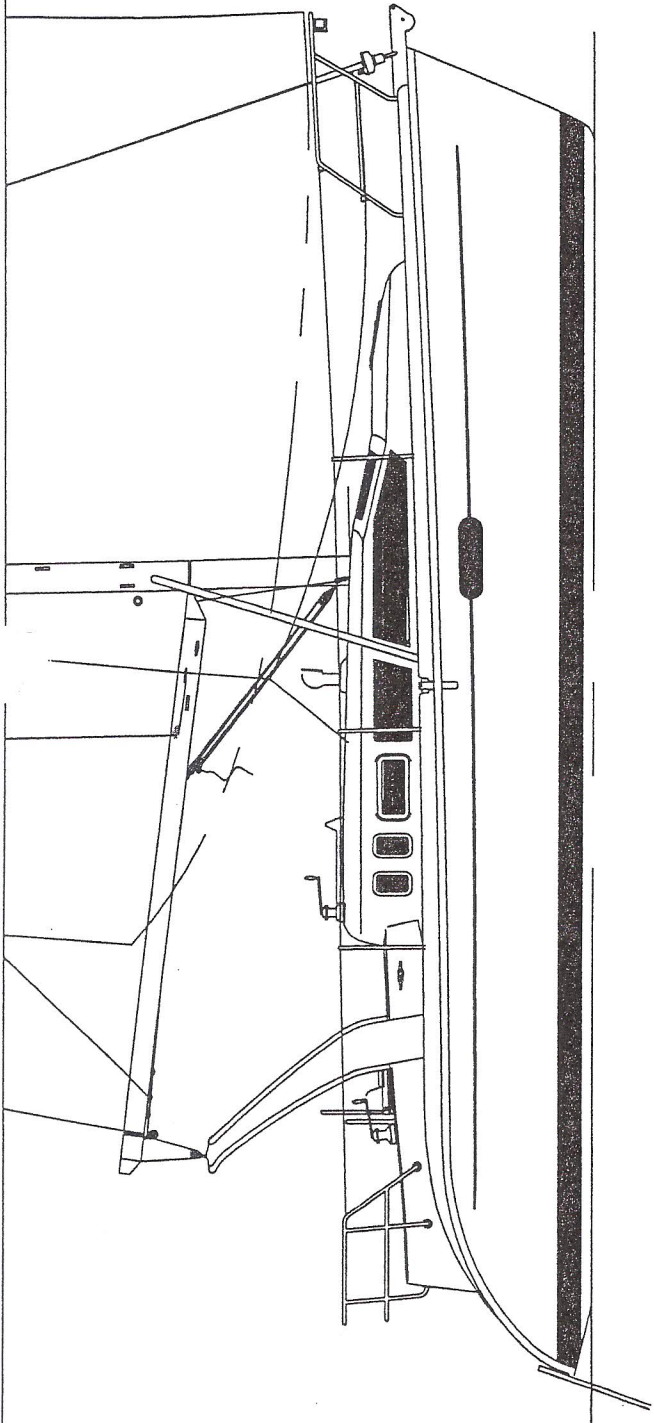
ENSIONS, CAPACITIES, ETC.

HUNTER 310

LENGTH OVERALL (LOA).....	30'10"	9.40m
LENGTH OF WATERLINE (LWL).....	28'0"	8.53m
BEAM (MAX).....	10'10"	3.30m
DRAFT (SHOAL).....	4'0"	1.22m
DRAFT (DEEP).....	5'6"	1.68m
DISPLACEMENT.....	8,551 lbs.	3,887 kg
BALLAST	3,000 lbs.	1,361 kg
SAIL AREA (100% TRAIANGLES).....	464 sq. ft.	43.1 sq.m
SAIL AREA (ACTUAL W/STANDARD SAILS).....	545 sq. ft.	50.6 sq.m
I.....	37'1"	11.30m
J	11'8"	3.56m
P.....	39'1"	11.91m
E.....	12'8"	3.86m
MAST HEIGHT (FROM WATERLINE).....	49'4"	15.04m
HEADROOM.....	6'4"	1.93m
WATER CAPACITY.....	50 U.S. gal.	189 liters
HOLDING TANK CAPACITY.....	50 U S gal.	76 liters
FUEL TANK CAPACITY.....	25 US gal.	95 liters
LPG TANK CAPACITY.....	4 lbs.	1.82 kg
BATTERY CAPACITY.....	DEALER SUPPLIED	
ELECTRICAL VOLTAGES.....	SEE ELECTRICAL DRAWINGS	
INBOARD ENGINES.....	18 hp	13.4 kw
MAXIMUM LOADING.....	10 PEOPLE	1250 kg (INCLIDING LUGGAGE)
LIFTING POINTS.....	INDICATED BY "SLING" LABELS ON HULL	



DECK HARDWARE LAYOUT



OPTIONAL DECK LAYOUT

310 DECK GEAR

11/23/96

NUMBER	PART	HUNTER #	MANUFACTURER	MANUFACT #	FILE NAME	QUANTITY
1	WINCH	HW2519	LEWMAR	30ST		1
3	WINCH	HW2518	LEWMAR	16ST		1
5	FWD HATCH	HW0120	BOMAR	1080-10A		1
	TRIM RING	HW				1
	SCREEN	HW				1
6	CABIN WINDSHIELD	PX				1
21	MID HATCH	HW0014	LEWMAR	COAST 10		2
	TRIM RING	HW				2
	SCREEN	HW				2
7	HINGE	HW4172	GEM			12
8	ANCHOR LOCKER HANDLE	HW4481	SOUTHCOAST			1
9	STRIKER PLATE	HW	KENS		30620024	1
10	BOW PULPIT	HW	SOUTHCOAST		306008	1
11	STANCHION 450 TYPE	HW1747	SOUTHCOAST		30620018	6
12	HALYARD STOPPER STBD	HW1259	SPINLOCK		XA3	2
	HALYARD STOPPER PORT	HW1276	SPINLOCK		XA2	2
13	JIB TRACK	29.5 STYLE	25" LONG			2
	JIB TRACK ENDS	HWO205	SCHAEFER			2
	JIB TRACK CAR	HW0238	SCHAEFER			2
14	CLEAT	HWO975				7
69	CLEAT	HW0980				1
15	CABIN WINDSHIELD	PX	VIPLEX			1
16	WINDOW (PLEXI)	PX				2
17	WINDOW PLEXI)	PX				2
18	WINDOW	PX0323				2
19	OPENING WINDOW	HW0043				2
66	WINDOW (PLEXI)	PL				2
67	WINDOW (COCKPIT)	HW0039				1
	TRIM RING	HW				1
	SCREEN	HW				1
20	HALYARD ORGANIZER	HWO399	SCHAEFER	505-81		2
22	SEA HOOD		GLASS PART		3060003	1
24	DIESEL FILL	PL1126	SEADOG			1
25	WATER FILL	PL1130	SEADOG			1
26	WASTE PUMP OUT	PL1140	TIMA			1
28	FORMER EURO HATCH LID		GLASS PART			1
29	ANCHOR HATCH LID		GLASS PART			1
30	GULL WING HATCH LID		GLASS PART			2
31	HULL SIDE PORT (FIXED)	PX	NORTH FLORIDA			2
32	INSPECTION PORT	VC010004	BECKSON			1
33	TRANSOM SHOWER	PLO189	SAILING SPEC			1
34	BILGE PUMP	PLO371	RULE			1
35	BOW ROLLER	HW1610	SOUTHCOAST		30620023	1
36	BOW LIGHT	ELO380	HELLA			1
37	MAINSHEET SYSTEM					
	ARCH MS. BLOCK	HW	HARKEN	O11		2
	BOOM BLOCK MS.	HW	HARKEN	O11		1
	STRAP EYE	HW	HARKEN	1558		2
	SPRING	HW	HARKEN	71		2
39	VANG BLOCK	HW0211	SCHAEFER	505-45		1
40	VANG BLOCK	HW0280	SCHAEFER	505-75		1
43	DORADE	HW4257	MARINCO			2
45	SWIM LADDER	HW	WINDLINE	TLD-3X		1
46	COCKPIT TABLE	N/A	HUNTCl MIll			1
	STEERING SYSTEM	HW	EDSON	RACK AND PINYON		1
47	COMPASS	LGO135	RITCHIE	PO79397		1
48	MAST STEP	HW	Z-SPAR	1103		1

49	GULL WING SEAT HANDLE	HW2318				2
51	STERN RAIL	HW2246				2
52	TRANSOM HATCH LID		GLASS PART			2
61	VERTICAL CHAINPLATE	HW1748			30620022	2
62	LOWER CHAINPLATE	HW1748			30620021	2
63	BLOCK WITH CAM STOPPER	HW	SPINLOCK	JK/50		2
65	U BOLT	HW5512				1
70	GRAB HANDLE	HW2315				1
71	HELM SEAT HINGE	HW4175				2
	MAIN HALYARD	RIO775				1
	JIB HALYARD	RIO775				1
	MAIN TRAVELER LINE	RIO775				2
	REEFING LINE #1	RIO775				1
	REEFING LINE #2	RIO775				1
	JIB SHEET	RIO775				2
	VANG	RIO775				1
	LAZY JACK WIRE	RIO775				2
	ADJUSTABLE LAZY JACK LINE	RIO775				2
	MAINSHEET	RIO775				1

OPTIONAL GEAR

4	WINDLASS	HW	SIMPSON LAWREN	SL00605167		1
56	SNATCH BLOCK OPTIONAL	HW	SCHAEFER	07-99		2
	STEERING SYSTEM	HW	EDSON	QUADRENT		1
23	TRAVELER BAR	HW	HARKEN	1510-5' 6"		1
	TRAVELER CAR	HWO340	HARKEN	1508		1
	TRAVELER END CAPS	HWO343	HARKEN	1524		2
	STAND UP TOGGLE	HWO340	HARKEN	1561		

	PORT CONTROL BLOCK	HW0341	HARKEN	1516		1
	STBD. CONTROL BLOCK	HW0342	HARKEN	1516		1
	TRAVELER CONTROL BLOCK	HW0340	HARKEN	1845		2
	3" HARKEN BLOCK	HW	HARKEN	1540		1
	OVER THE TOP BLOCKS	PR5108	SCHAEFFER	506-40		4
	CAM CLEATS	PR5109	HARKEN	365		2

SPINN. GEAR

2	WINCH	HW2519	LEWMAR	30ST		2
50	SPIN BLOCK OPTIONAL	HW0276	SCHAEFER	505-15		2
68	MAST STEP BLOCK	RIO448	ZSPARS	275		1
69	LINE STOPPER	HW1274	XA-1			
	SPIN. SHEET	RI0245				2
	SPIN. HALYARD	RI0245				1

TRAVELER NEW AS OF Hull # 216

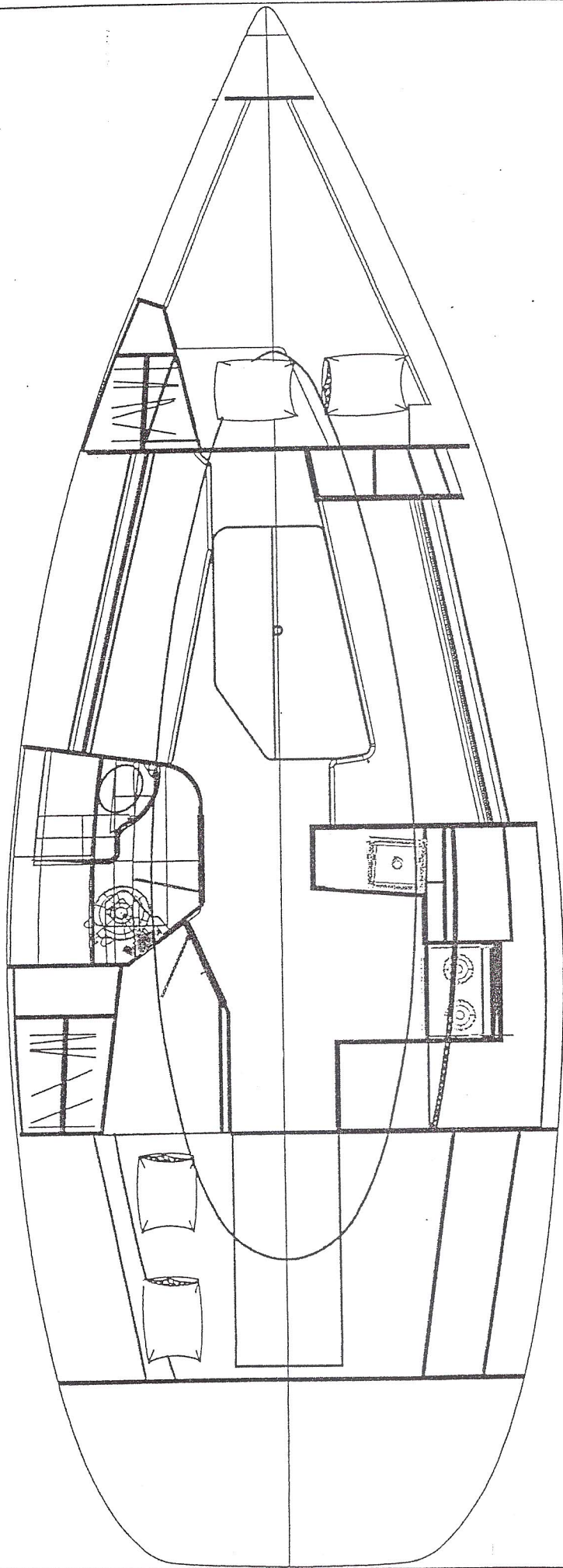
49	GULL WING SEAT HANDLE	HW2318				2	
51	STERN RAIL	HW2246				2	
52	TRANSOM HATCH LID		GLASS PART			2	
61	VERTICAL CHAINPLATE	HW1748		30620022		2	
62	LOWER CHAINPLATE	HW1748		30620021		2	
63	BLOCK WITH CAM STOPPER	HW	SPINLOCK	JK/50		2	
65	U BOLT	HW5512				1	
70	GRAB HANDLE	HW2315				1	
71	HELM SEAT HINGE	HW4175				2	
	MAIN HALYARD	RI0775				1	
	JIB HALYARD	RI0775				1	
	MAIN TRAVELER LINE	RI0775				2	
	REEFING LINE #1	RI0775				1	
	REEFING LINE #2	RI0775				1	
	JIB SHEET	RI0775				2	
	VANG	RI0775				1	
	LAZY JACK WIRE	RI0775				2	
	ADJUSTABLE LAZY JACK LINE	RI0775				2	
	MAINSHEET	RI0775				1	

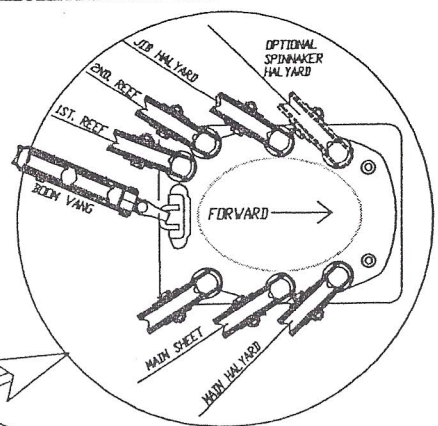
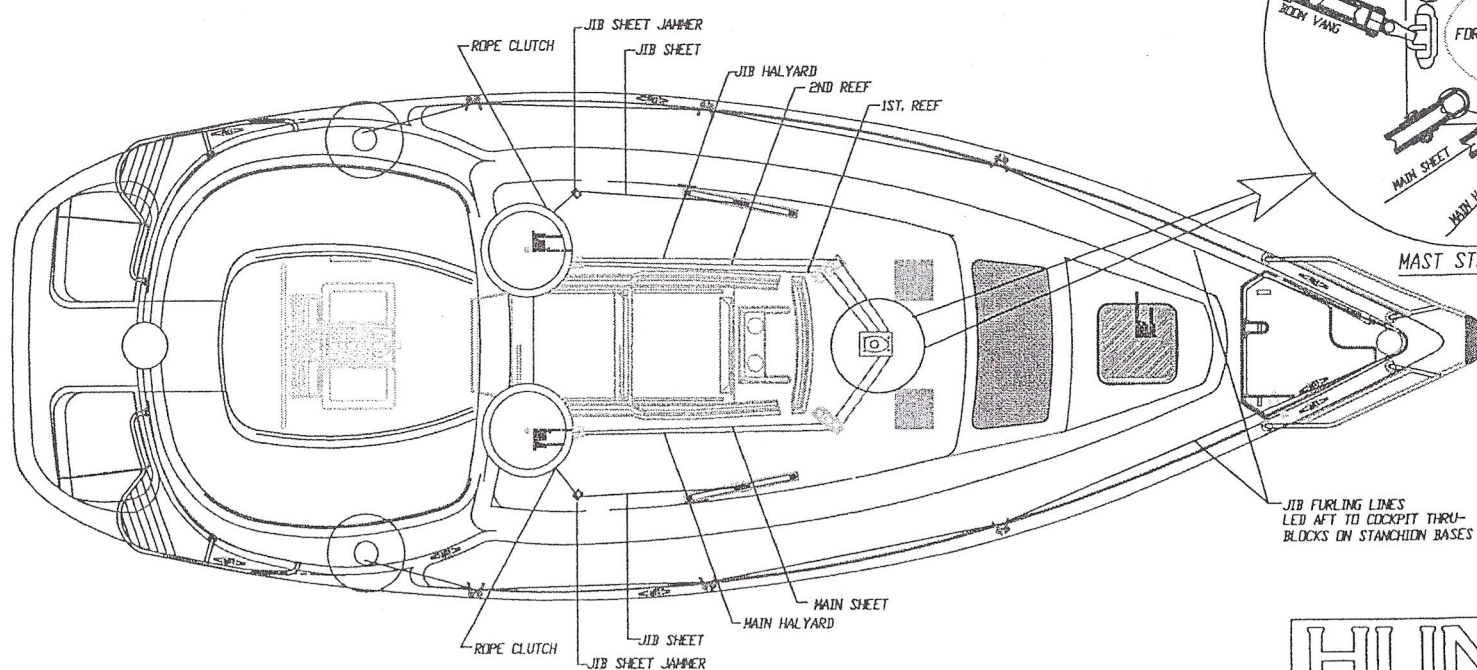
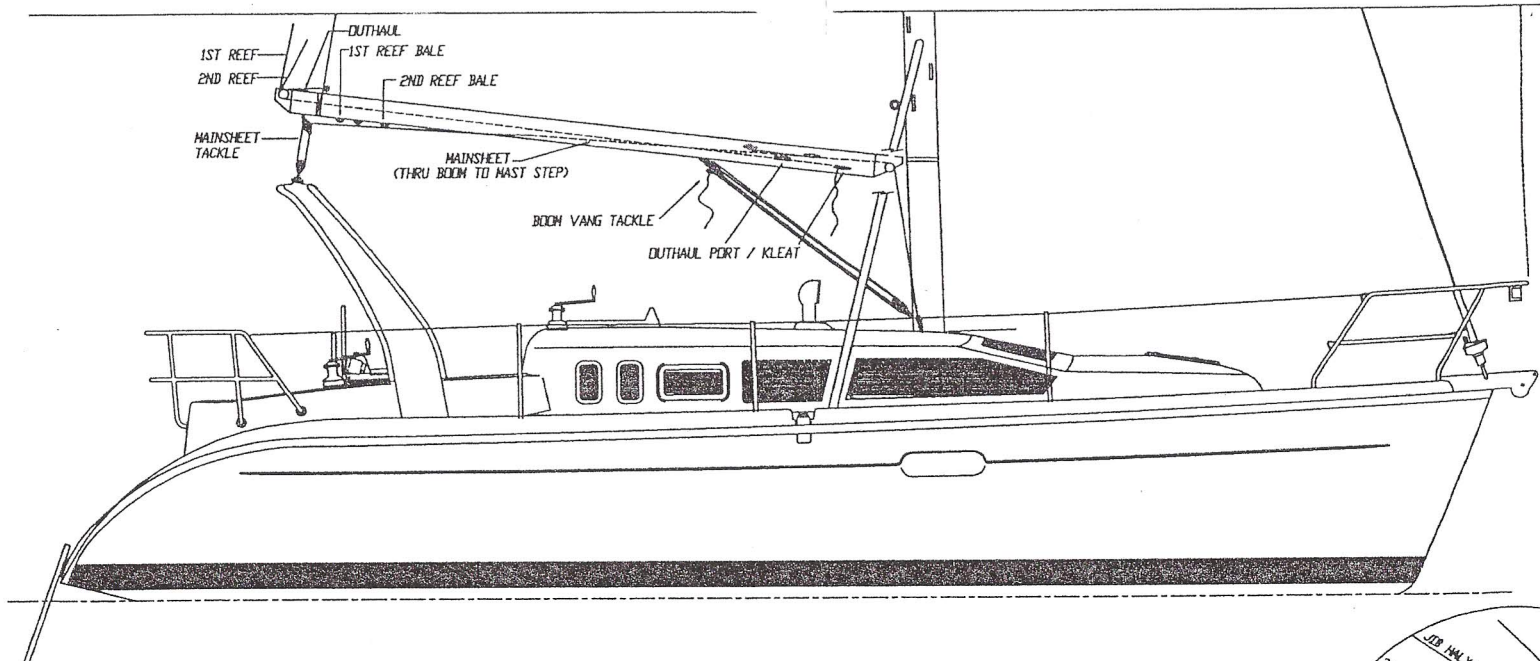
OPTIONAL GEAR

4	WINDLASS	HW	SIMPSON LAWRENCE SL00605167			1	
56	SNATCH BLOCK OPTIONAL	HW	SCHAEFFER	07-99		2	
	STEERING SYSTEM	HW	EDSON	QUADRENT		1	
	TRAVELER BAR	HW	HARKEN	1510-5' 6"		1	
23	TRAVELER CAR	HW0340	HARKEN	1508		1	
	TRAVELER END CAPS	HW0343	HARKEN	1524		2	
	STAND UP TOGGLE	HW0340	HARKEN	1561		2	
	PORT CONTROL BLOCK	HW0341	HARKEN	1520		2	
	STBD. CONTROL BLOCK	HW0342	HARKEN	1521		2	
	TRAVELER CONTROL BLOCK	HW	HARKEN	1845		2	
	3" HARKEN BLOCK	HW	HARKEN	1540		1	

SPINN. GEAR

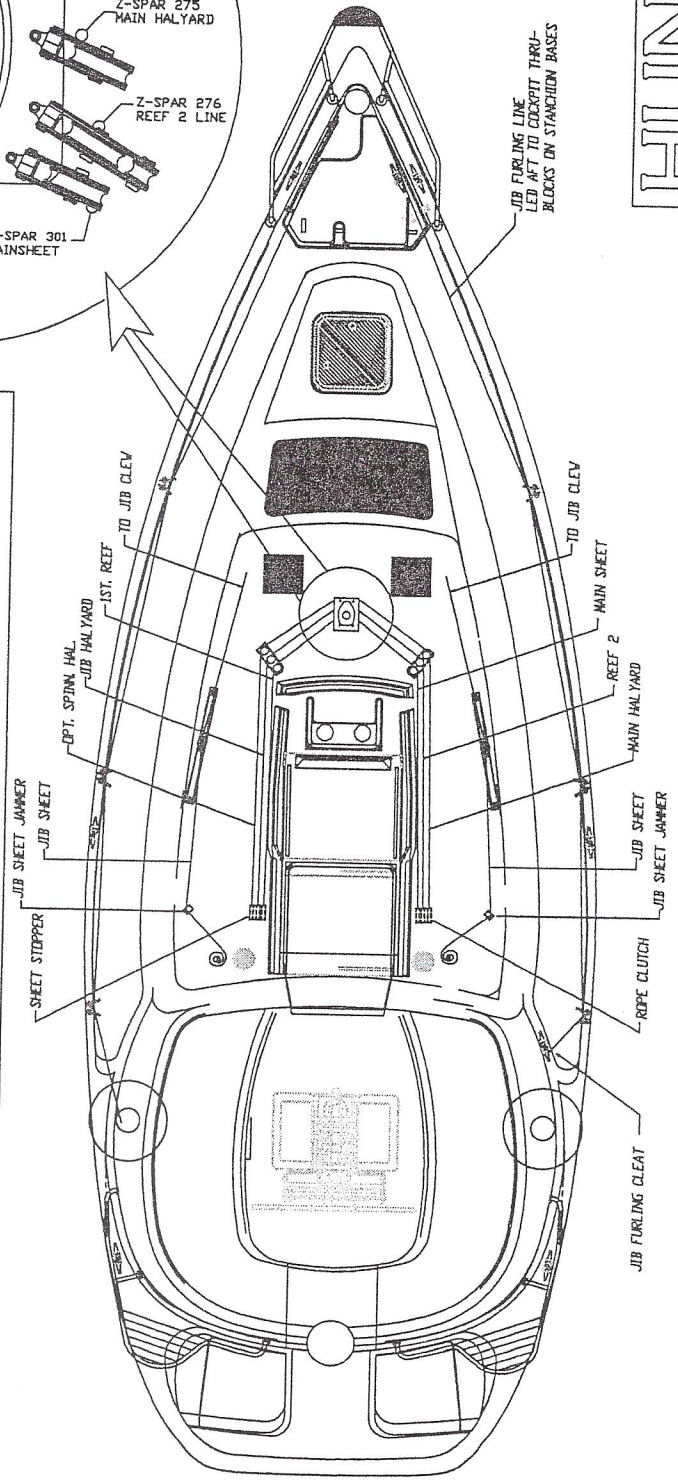
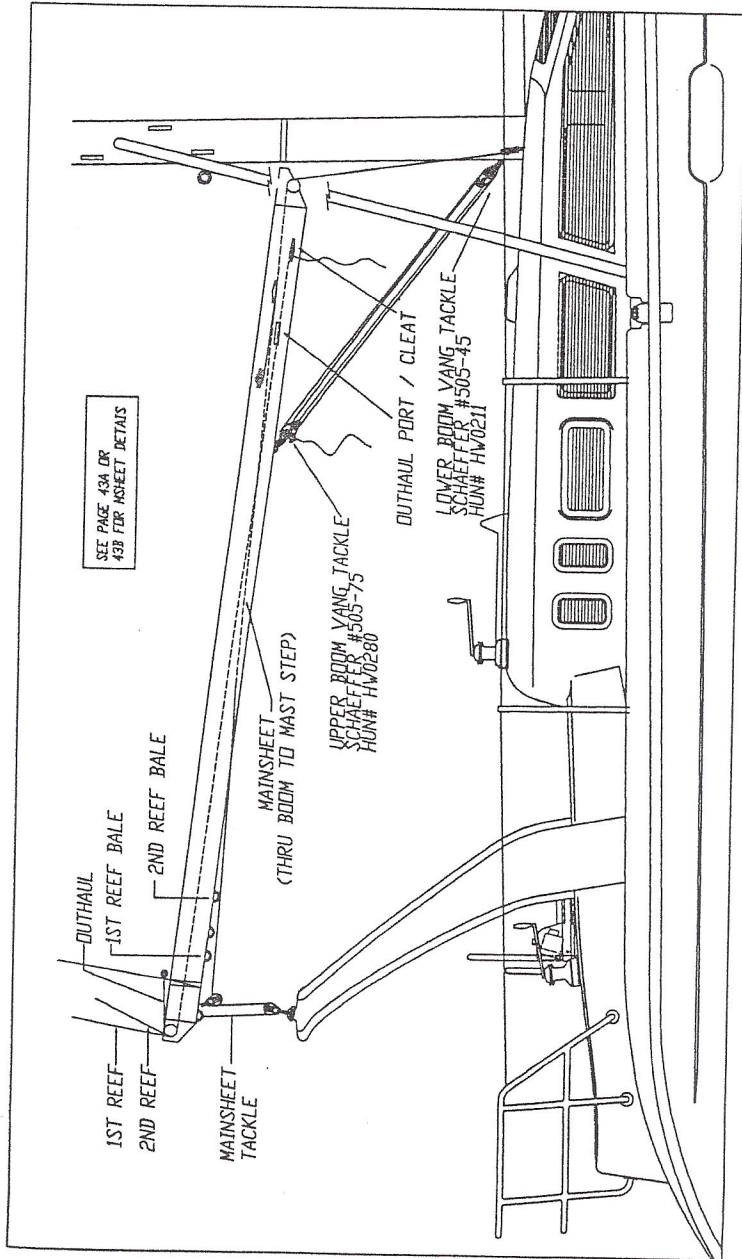
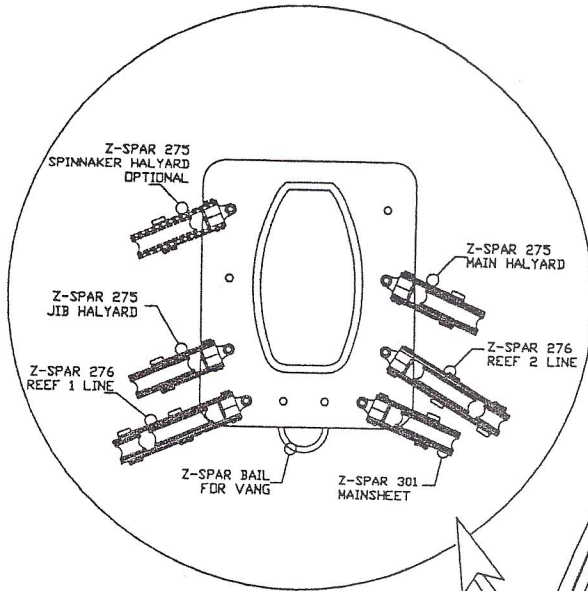
2	WINCH	HW2519	LEWMAR	30ST		2	
50	SPIN BLOCK OPTIONAL	HW0276	SCHAEFFER	505-15		2	
68	MAST STEP BLOCK	RI0448	ZSPARS	275		1	
69	LINE STOPPER	HW1274	XA-1			2	
	SPIN. SHEET	RI0245				2	
	SPIN. HALYARD	RI0245				1	





MAST STEP DETAIL

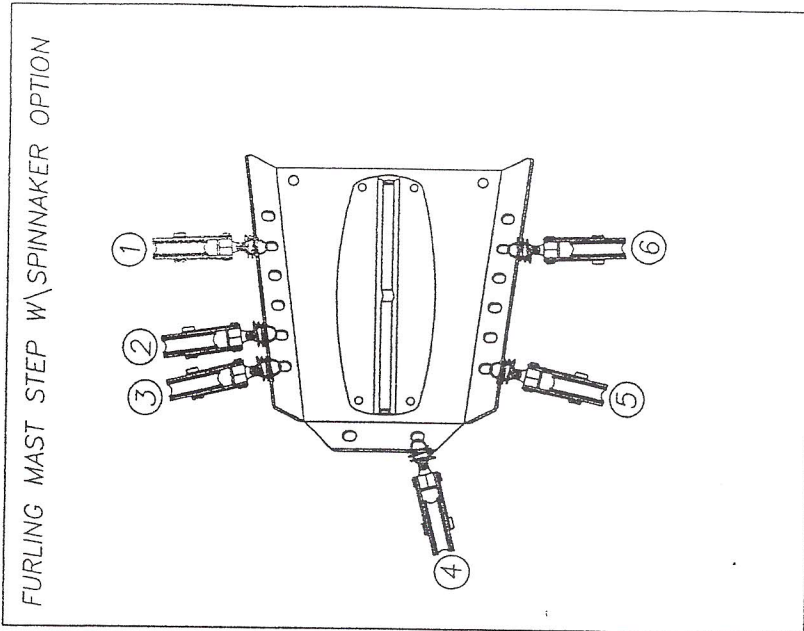
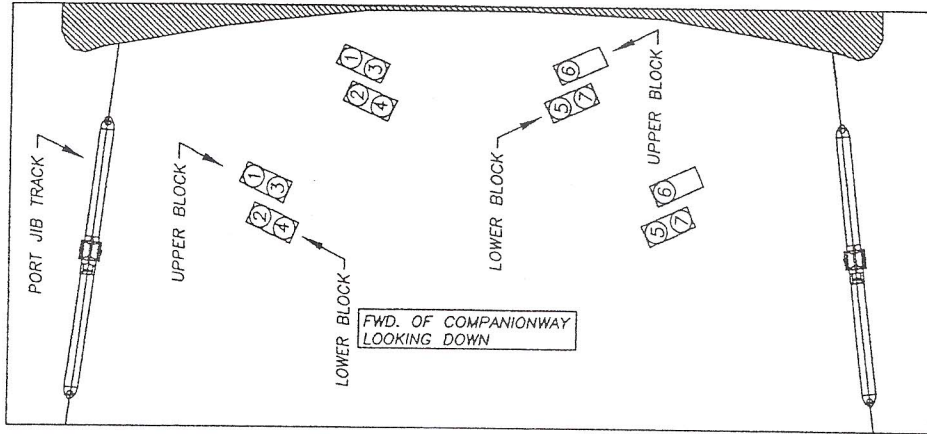
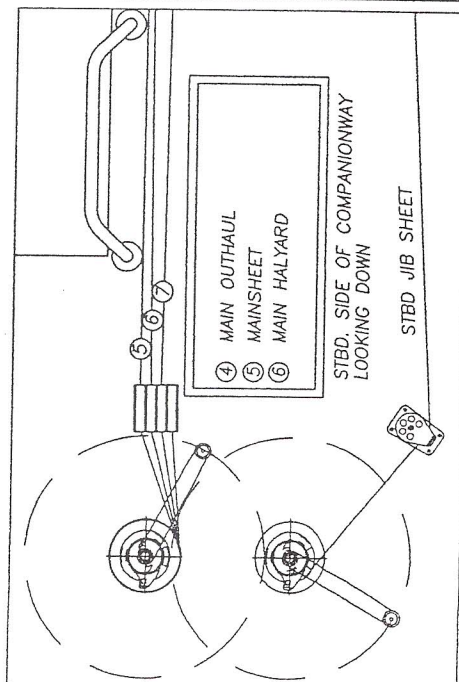
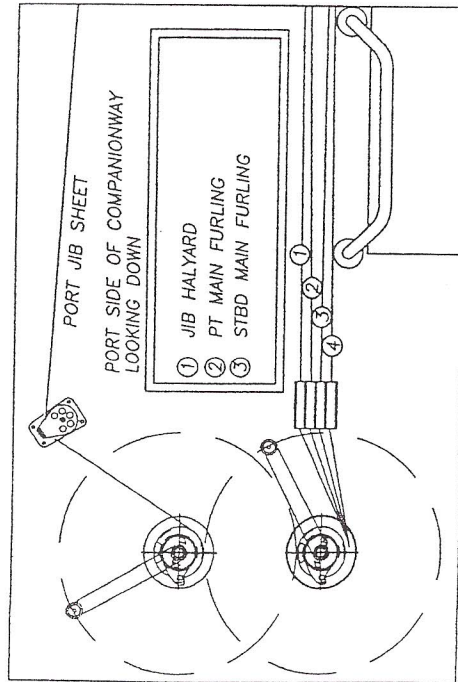
JIB FURLING LINES
LED AFT TO COCKPIT THRU-
BLOCKS ON STANCHION BASES



RUNNING RIGGING & MAST STEP LAYOUT (STANDARD)

ADDED AS OF 6/8/98

SELDEN FURLING



NOTE:

ALL BLOCKS RUTGERSON SERIES 500 W/ SPRINGS

REVISION TITLE: 310 RUN. RIG & MAST STEP DETAIL (FURLING)

REVISION NO. 1 08042B-2 NONE

DATE 2/11/98

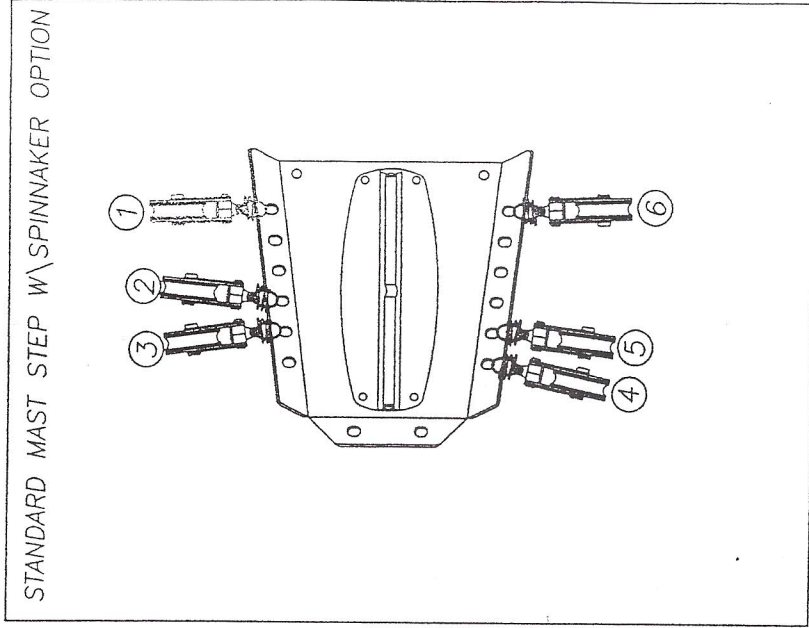
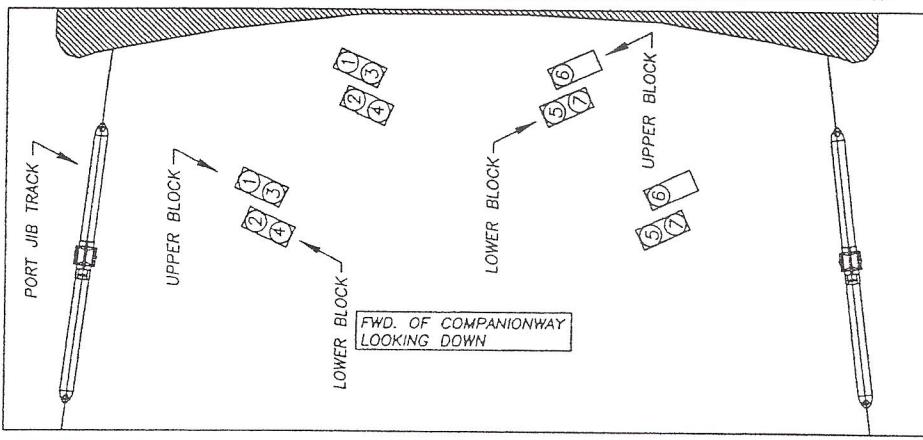
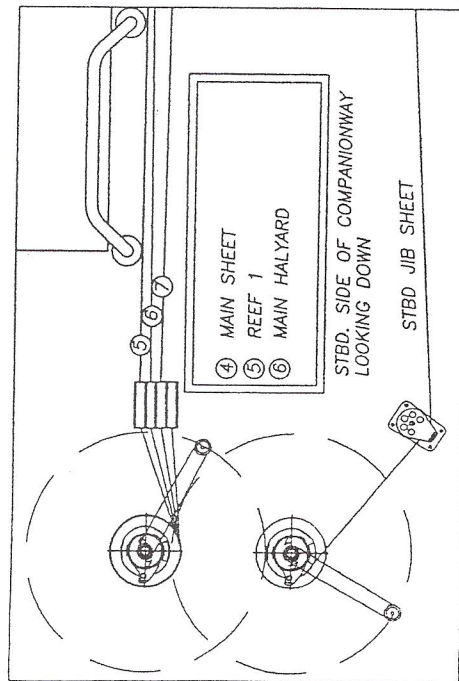
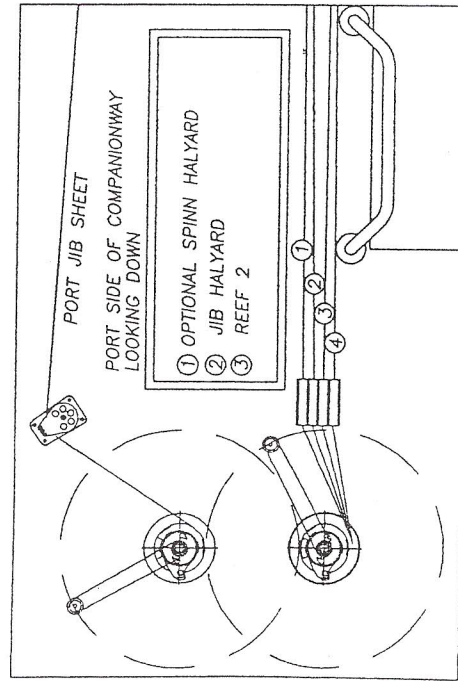
ENGINEERING DEPT.

HUNTER

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ADDED AS OF 6/3/98

SELDEN STANDARD

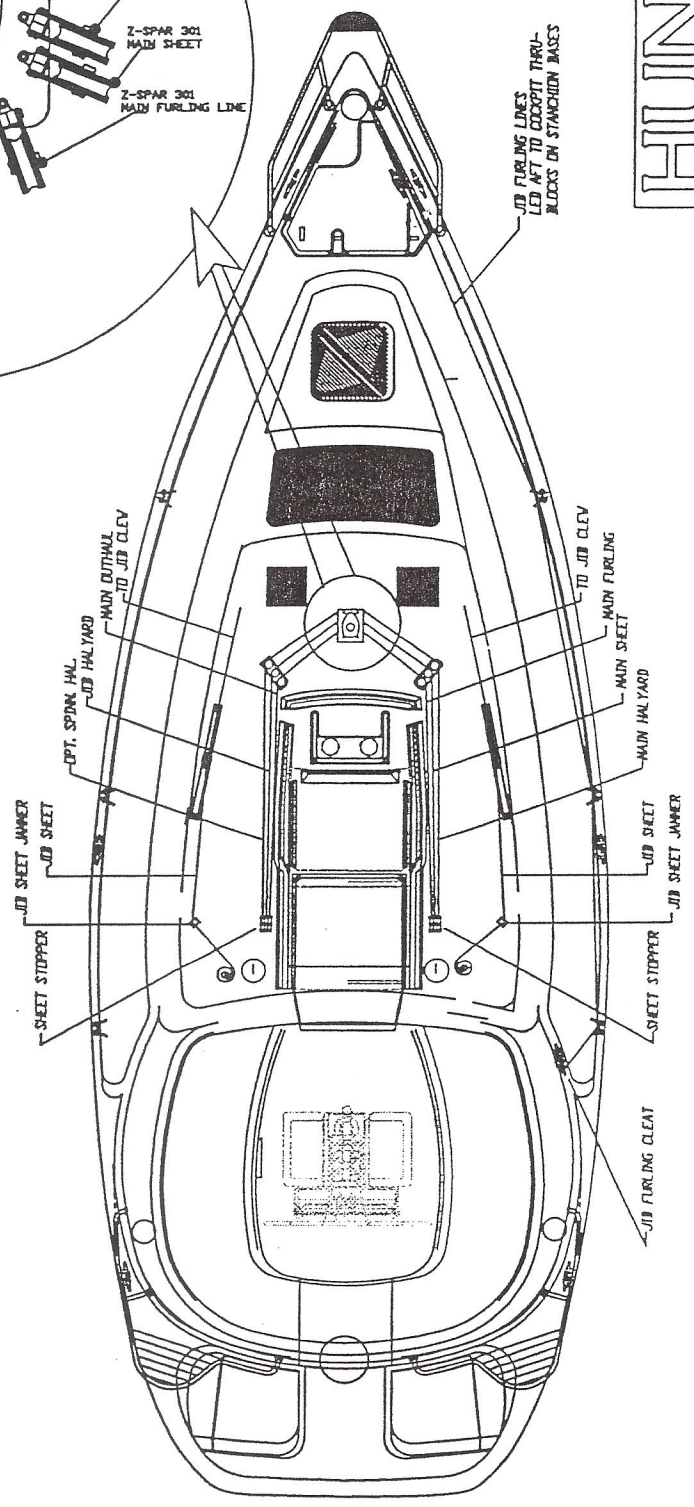
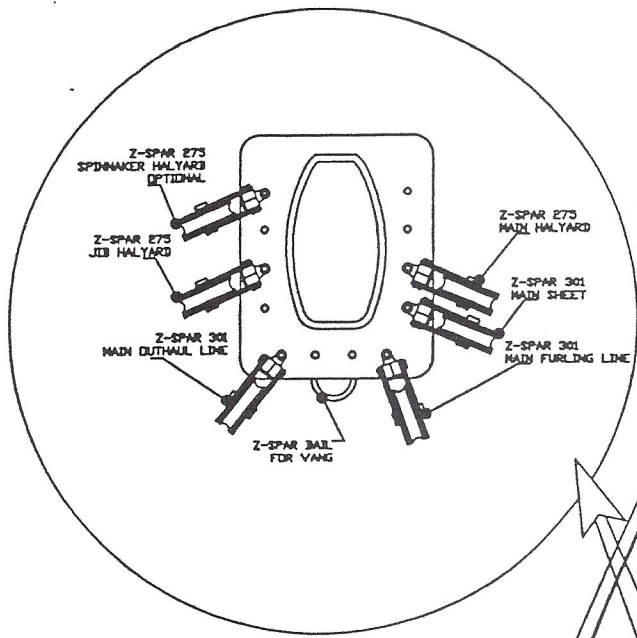
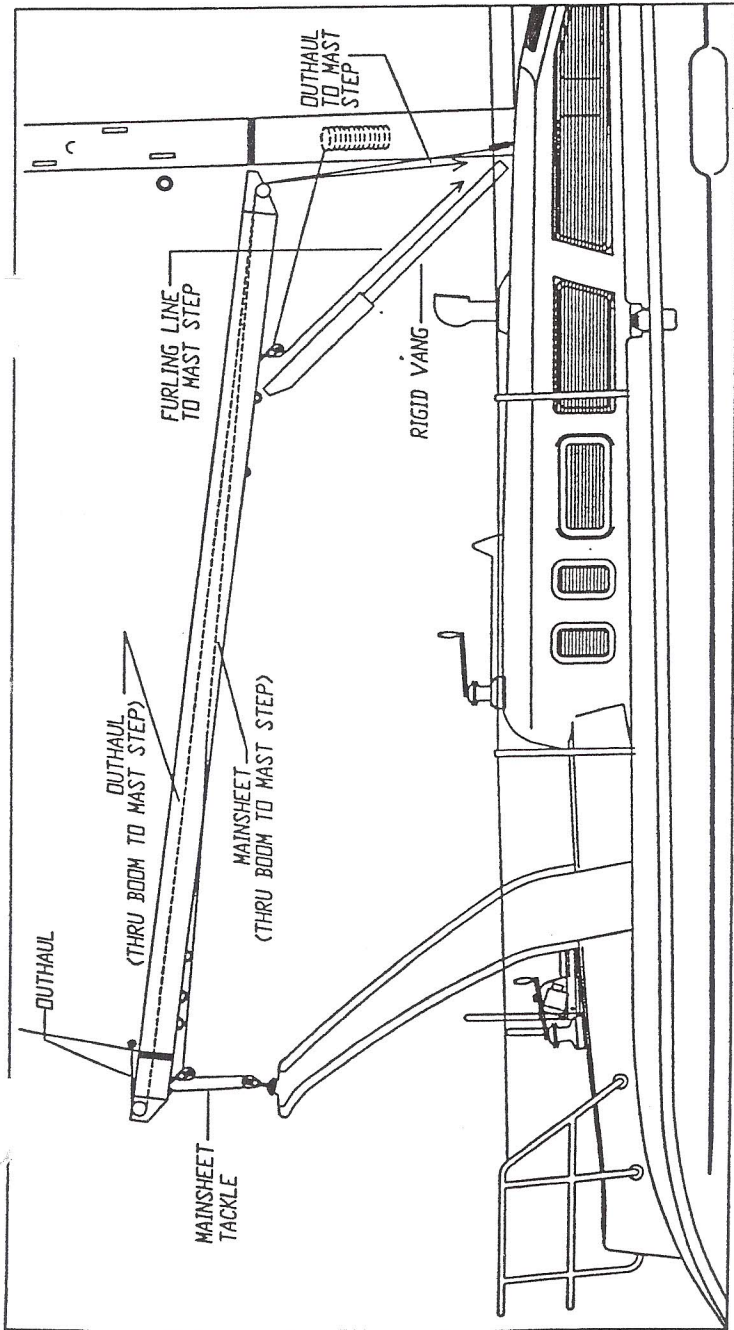


NOTE:
ALL BLOCKS RUTGERSON SERIES 500 W/ SPRINGS

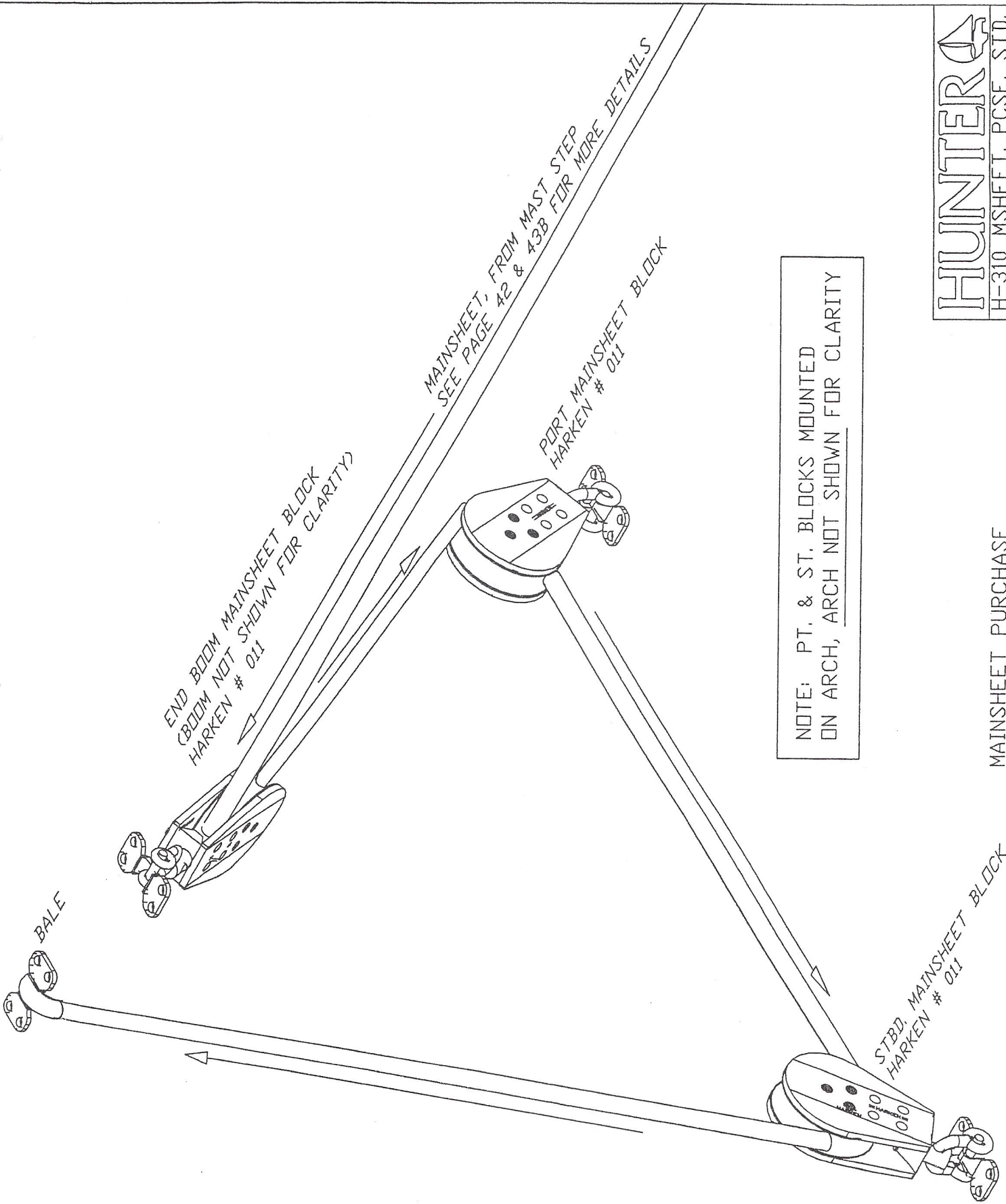
310 RUN, RIG & MAST STEP DETAIL (STD)

REVISION NO. NONE
ENGINEERING DEPT. DATE 2/11/98

HUNTER



RUNNING RIGGING & MAST STEP LAYOUT (FURLING)



MAINSHEET, FROM MAST STEP
SEE PAGE 42 & 43B FOR MORE DETAILS

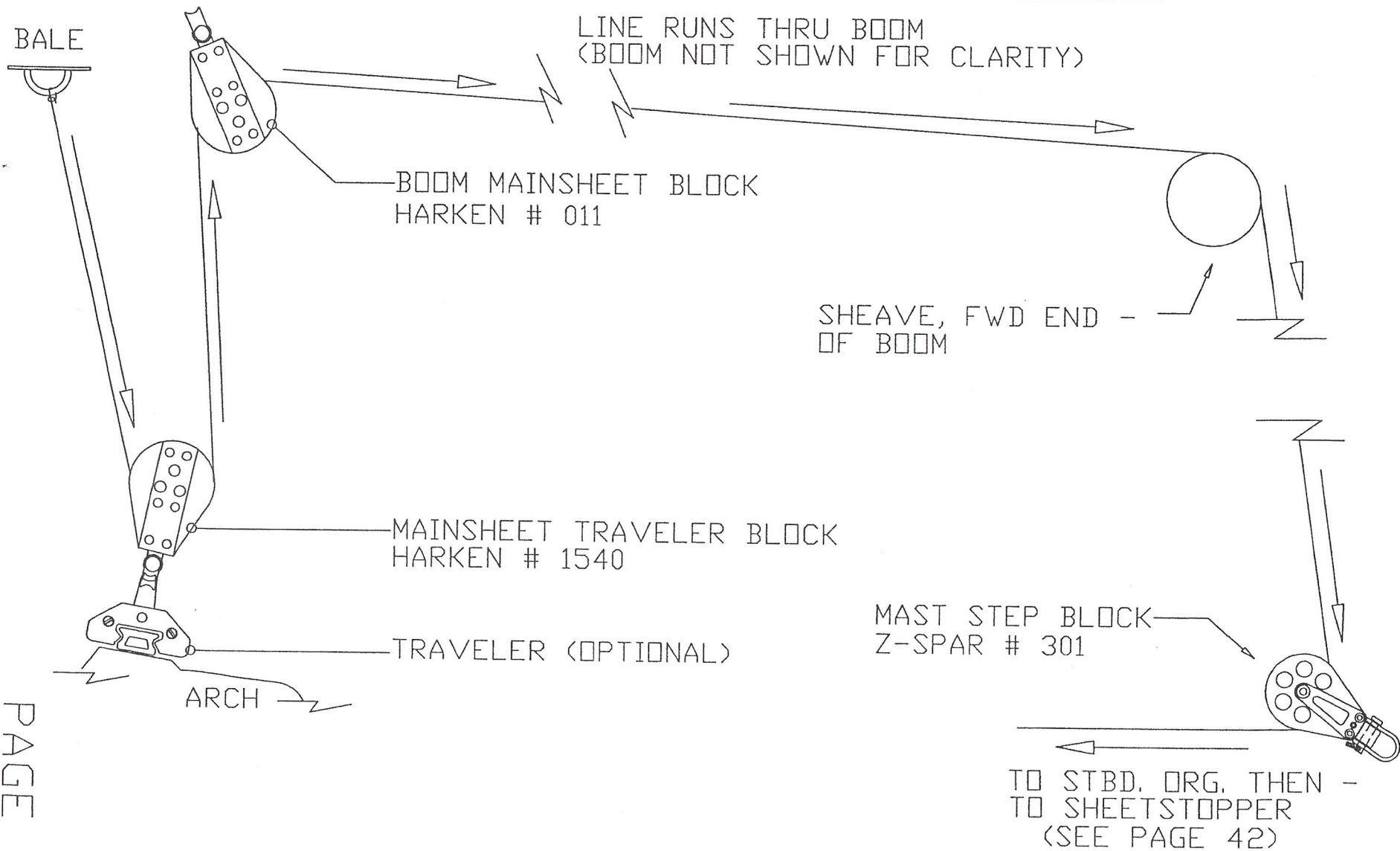
END BOOM MAINSHEET BLOCK
(BOOM NOT SHOWN FOR CLARITY)
HARKEN # 011

PORT MAINSHEET BLOCK
HARKEN # 011

STBD. MAINSHEET BLOCK
HARKEN # 011

NOTE: PT. & ST. BLOCKS MOUNTED
ON ARCH, ARCH NOT SHOWN FOR CLARITY

IMPORTANT!
USE CAUTION WHEN EASING LAZY JACK TENSION
TO PREVENT BOOM FROM STRIKING ARCH

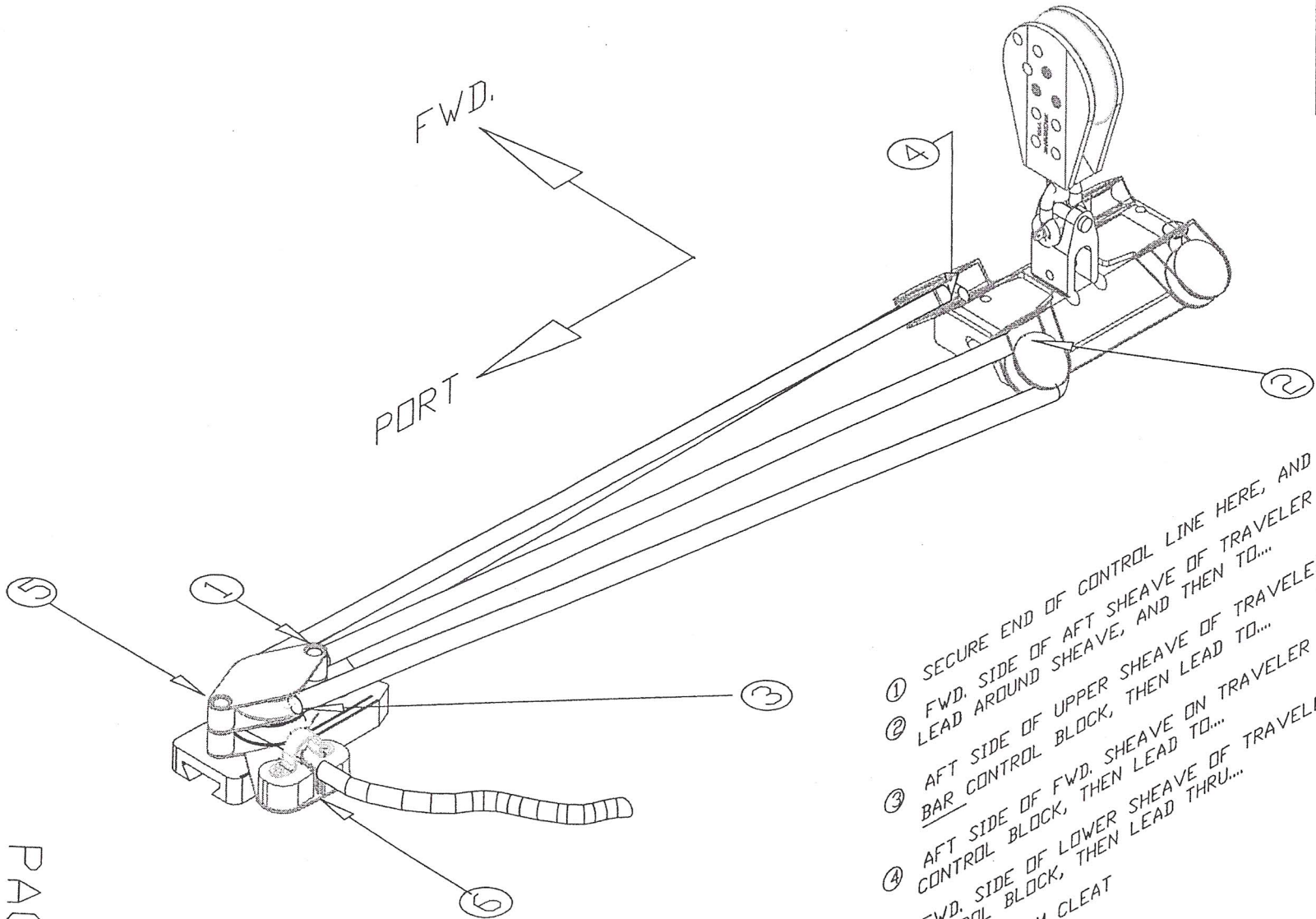


PAGE 43B

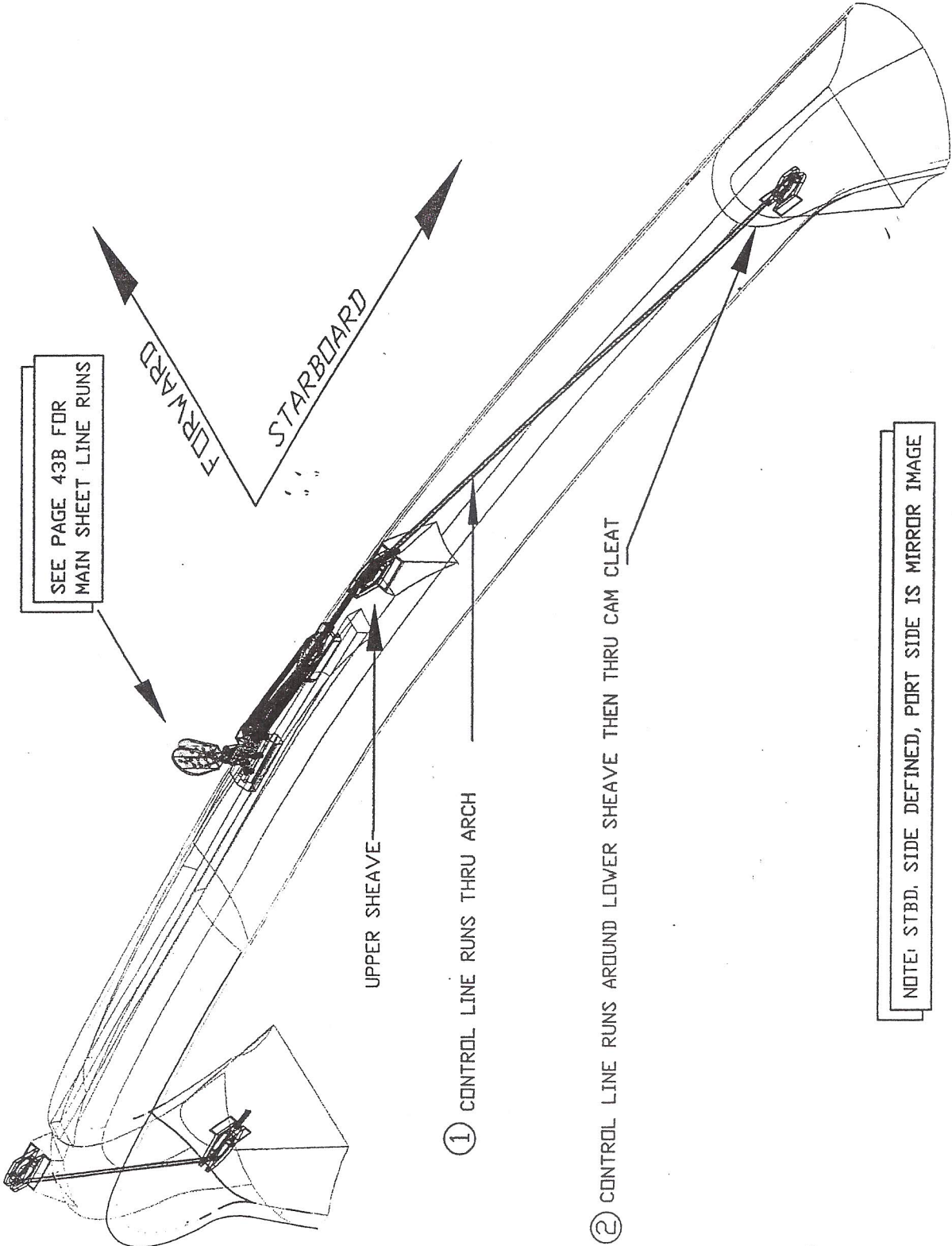
MAINSHEET PURCHASE (W/OPTIONAL TRAVELER)

HUNTER 
H-310 END BOOM MS. PCSE.
DRAWING # 3108043B

NOTE:
 PORT SIDE SHOWN, STBD. SIDE
 IS MIRROR IMAGE
 SEE PAGE 43B FOR
 MAINSHEET DETAILS
 TRAVELER BAR NOT SHOWN
 FOR CLARITY



- ① SECURE END OF CONTROL LINE HERE, AND LEAD TO....
- ② FWD. SIDE OF AFT SHEAVE OF TRAVELER CAR CONTROL BLOCK, LEAD AROUND SHEAVE, AND THEN TO....
- ③ AFT SIDE OF UPPER SHEAVE OF TRAVELER BAR CONTROL BLOCK, THEN LEAD TO....
- ④ AFT SIDE OF FWD. SHEAVE ON TRAVELER CONTROL BLOCK, THEN LEAD TO....
- ⑤ FWD. SIDE OF LOWER SHEAVE OF TRAVELER CONTROL BLOCK, THEN LEAD THRU....
- ⑥ JAWS OF CAM CLEAT



SEE PAGE 43B FOR
MAIN SHEET LINE RUNS

FORWARD

STARBOARD

UPPER SHEAVE

① CONTROL LINE RUNS THRU ARCH

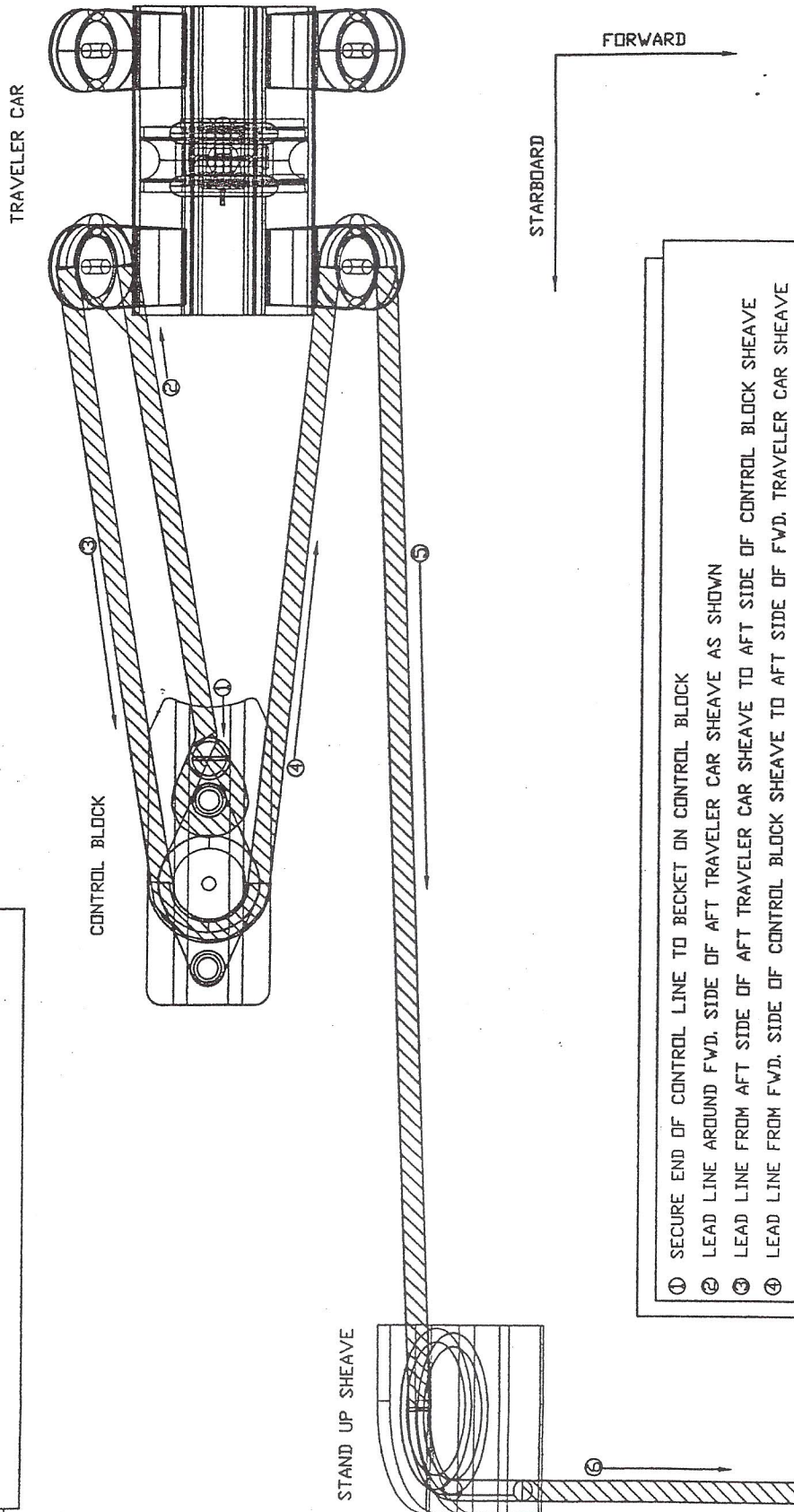
② CONTROL LINE RUNS AROUND LOWER SHEAVE THEN THRU CAM CLEAT

NOTE: STBD. SIDE DEFINED, PORT SIDE IS MIRROR IMAGE

<small>FORMING TITLE</small> H310 ARCH/TRAVELER DETAILS			
<small>DESIGN NO.</small> 310804SE	<small>DESIGN NO.</small> NONE	<small>DATE</small> 10/31/97	
<small>ENGINEERING DEPT.</small> HUNTERA			

NEW AS OF Hull # 216

NOTE: ARCH & TRAVELER BAR NOT SHOWN FOR CLARITY.
 STARBOARD SIDE SHOWN, PORT SIDE IS MIRROR IMAGE
 SEE FOLLOWING PAGE FOR MORE DETAILS



- ① SECURE END OF CONTROL LINE TO BECKET ON CONTROL BLOCK
- ② LEAD LINE AROUND FWD. SIDE OF AFT TRAVELER CAR SHEAVE AS SHOWN
- ③ LEAD LINE FROM AFT SIDE OF AFT TRAVELER CAR SHEAVE TO AFT SIDE OF CONTROL BLOCK SHEAVE
- ④ LEAD LINE FROM FWD. SIDE OF CONTROL BLOCK SHEAVE TO AFT SIDE OF FWD. TRAVELER CAR SHEAVE
- ⑤ LEAD LINE FROM FWD. SIDE OF FWD. TRAVELER CAR SHEAVE TO STAND UP SHEAVE
- ⑥ LEAD LINE AROUND STAND UP SHEAVE THEN DOWN THRU ARCH AND AROUND LOWER SHEAVE TO CAM CLEAT

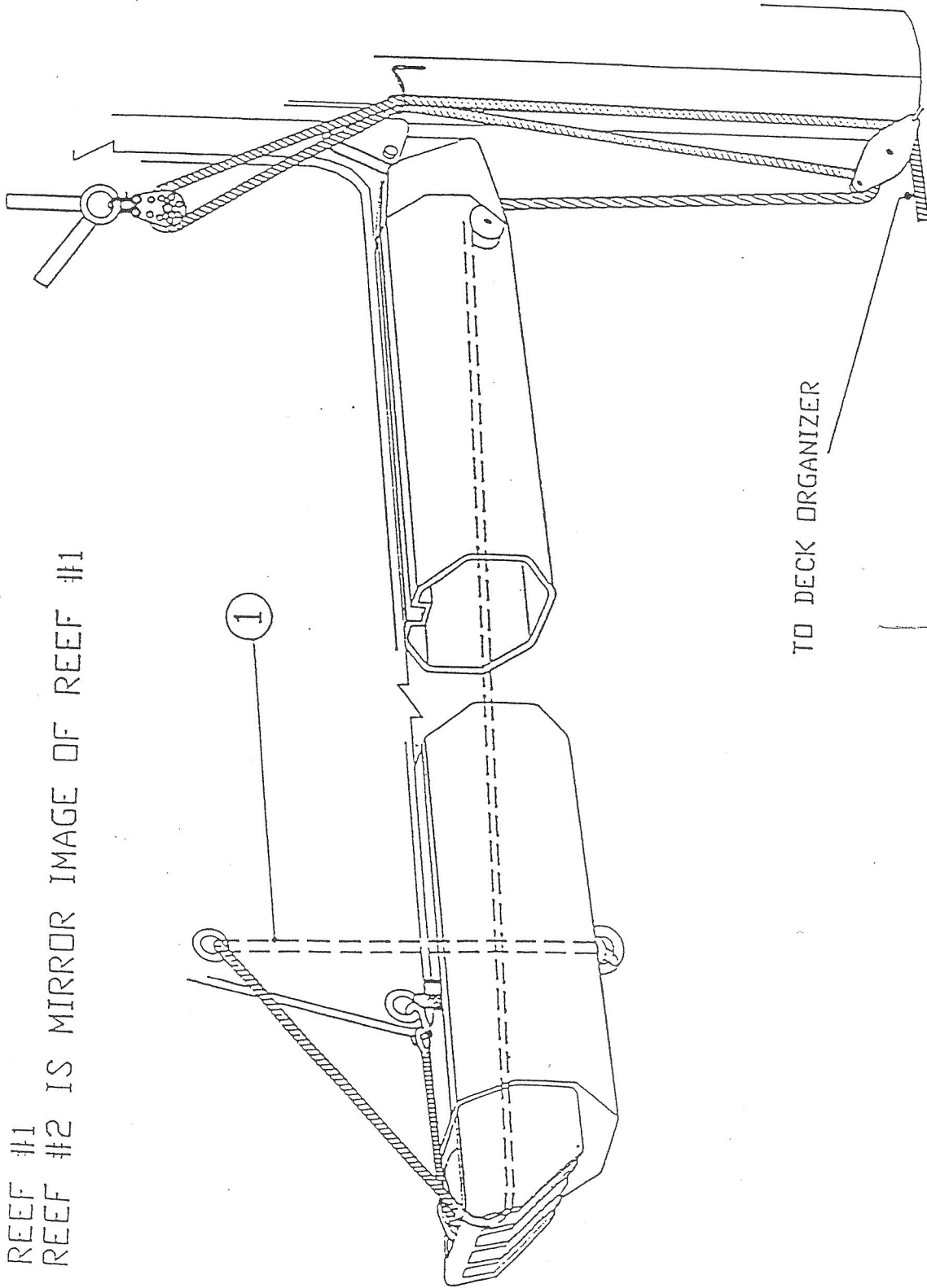
NEW AS OF Hull # 216

310 OPTIONAL TRAVELER LAYOUT

DESIGN NO.	310650-43D	REVISION NO.	NONE
DATE	10/31/87	ENGINEERING DEPT.	

HUNTERA

① REEF #1
REEF #2 IS MIRROR IMAGE OF REEF #1

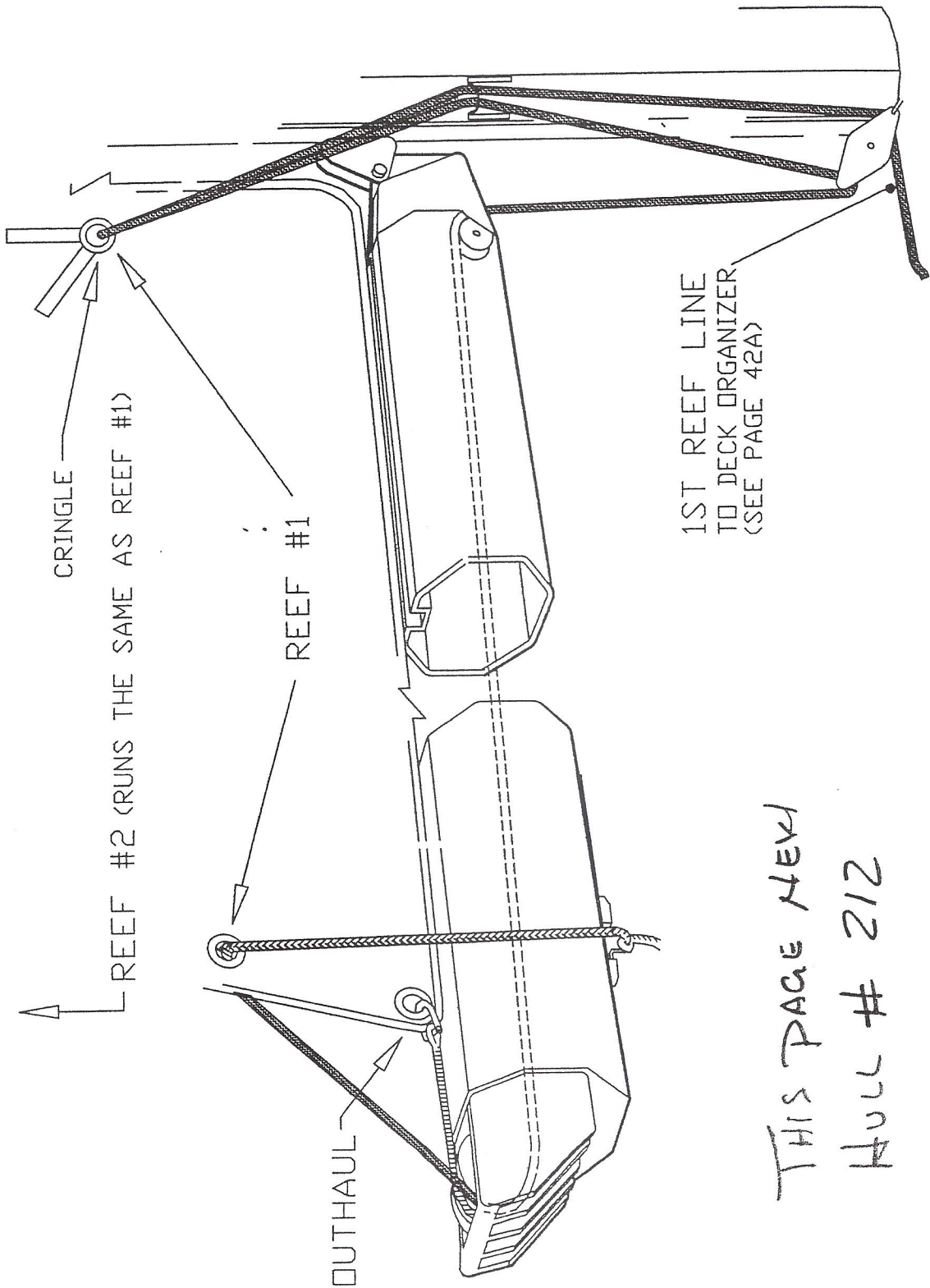


TO DECK ORGANIZER

HUNTER

H-310 BOOM & REEF
DRAWING # 3108044

BOOM & REEF LAYOUT



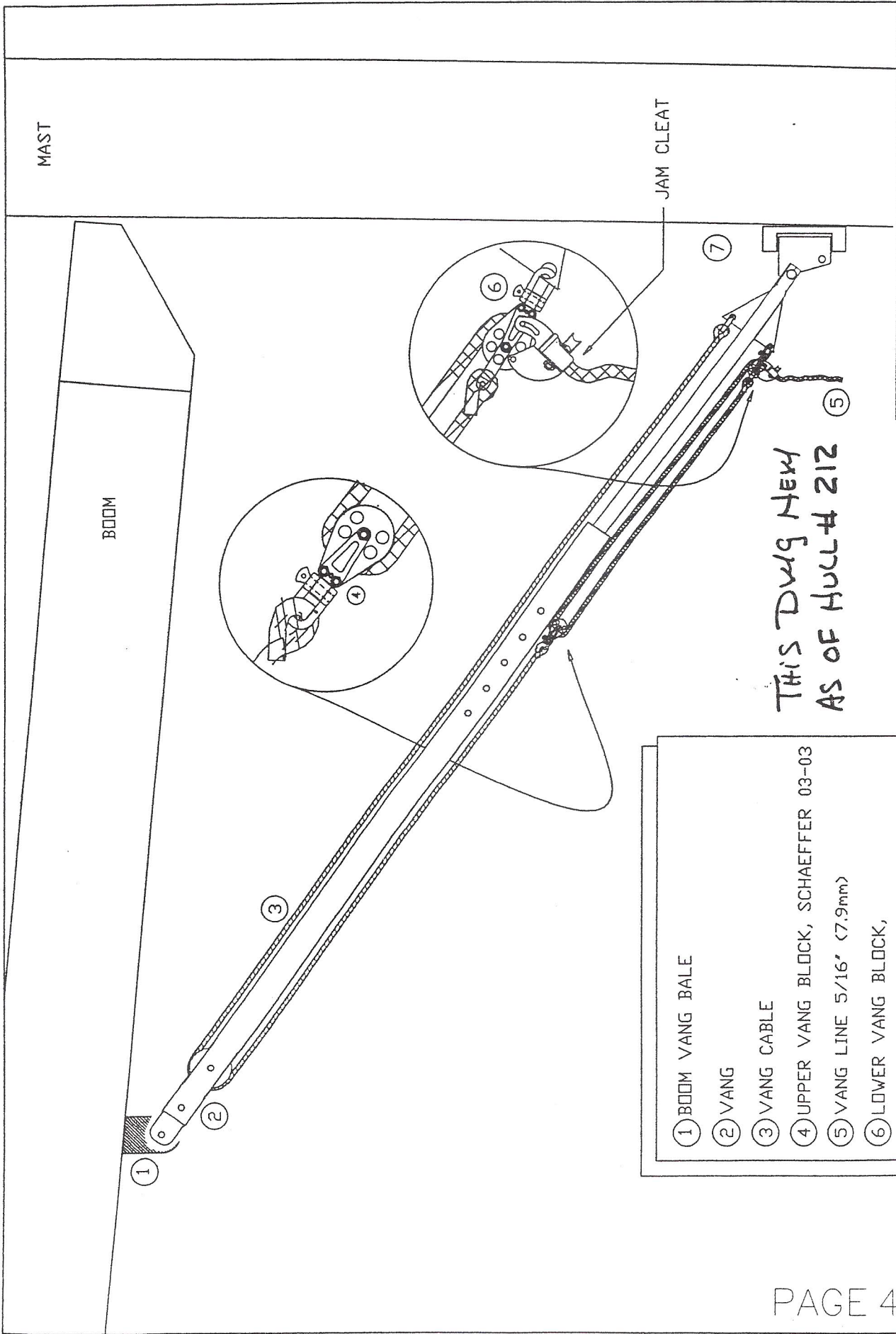
CRINGLE
 REEF #2 (RUNS THE SAME AS REEF #1)

REEF #1

OUTHHAUL

1ST REEF LINE
 TO DECK ORGANIZER
 (SEE PAGE 42A)

THIS PAGE NEXT
 Hull # 212



MAST

BOOM

JAM CLEAT

THIS DWG NEW
AS OF HULL # 212

- ① BOOM VANG BALE
- ② VANG
- ③ VANG CABLE
- ④ UPPER VANG BLOCK, SCHAEFFER 03-03
- ⑤ VANG LINE 5/16" (7.9mm)
- ⑥ LOWER VANG BLOCK,
- ⑦ VANG TOGGLE

HUNTERA
 For licensed deckhand information for each HUNTERA MODEL, COOP. Use proprietary code.
 PROJECT NO. 3108044B
 REVISION NO. NONE
 DRAWN BY: ENGINEERING DEPT.
 DATE: 11/22/97

REEFING INSTRUCTIONS

PRE-MARK THE MAIN HALYARD FOR EACH REEF

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 stainless steel eye on the side 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 (portside, RED,).
3. Raise the main sail.
4. Ease the mainsheet vang.
5. Lower the main sail to approximately the first reef position
6. Take up the slack in the first reefing line.
7. Adjust the main halyard so that the tack reef block is not contacting the stainless steel eye on the side of the spar and is applying tension to the luff of the main

above the reef, not below. There will be approximately 6" (150 mm) of stretch in the main luff and make sure that this is allowed for when adjusting the main halyard to locate the tack reef block.

8. 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 stainless steel eye 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" (25- mm) 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 & vang.
3. Lower the main halyard to the appropriate mark,

and snug the line with the stopper.

4. Tension the reefing line with the self-tailing winch until the reef clew is brought down to the boom. Apply stopper. Ease the topping lift.

SHAKING OUT A REEF

1. Head up into the wind.
2. Ease the mainsheet and vang.
3. Release the reef stopper and remove the reef line from the winch.
4. Tension the main halyard to raise the mainsail, ensuring that the reef lines run freely while the sail is

being raised. Then apply the line stopper to the main halyard.

5. Re-tension the boom vang and mainsheet.

RUNNING RIGGING SPECIFICATIONS

BOAT: h310 FILE NAME: PR3091 REVISION: SHORTENED JIB SHEET 11/26/96
 BY: KJC DATE: 10/10/96 SHORTENED MAIN HALY, CHANGE LAZY JACKS 12/10/96
 CHECKED BY: DATE:

OPT/STD	ITEM	QUANTITY	LINE SIZE	LINE TYPE	COLOR	END 1	LENGTH	END 2
1 STD	MAIN HALYARD	1	3/8" (9.5mm)	XLS EXTRA	BLUE	HEADBOARD SHACKLE	29.1 m 95 ft	BARE
2 STD	JIB HALYARD	1	3/8" (9.5mm)	XLS	RED	EYE	27.0 m 89 ft	BARE
3 OPT	MAIN TRAVELER LINE	2	5/16" (8mm)	LS	WHITE	SMALL EYE	6.7 m 22 ft	BARE
4 STD	MAINSHEET	1	3/8" (9.5mm)	LS	BLUE FLECK	SMALL EYE	15.6 m 51 ft	BARE
5 STD	REEFING LINE #1	1	3/8" (9.5mm)	TRACER	GREEN FLECK	BARE	18.0 m 59 ft	BARE
6 STD	REEFING LINE #2	1	3/8" (9.5mm)	TRACER	RED FLECK	BARE	25.9 m 85 ft	BARE
7 STD	JIB SHEET	2	7/16" (11mm)	LS	RED FLECK	BARE	9.0 m 29 ft	BARE
8 OPT	SPINN. SHEET	2	3/8" (9.5mm)	LS	BLACK FLECK	BARE	21.0 m 69 ft	BARE
9 OPT	SPINNAKER HALYARD	1	3/8" (9.5mm)	XLS	BLACK	SNAP SHACKLE NF11000s	27.0 m 89 ft	BARE
10 STD	VANG	1	3/8" (9.5mm)	LS	WHITE	SMALL EYE	14.7 m 48 ft	BARE
11 STD	LAZY JACK WIRE	2	5/32" (4mm)	PLASTIC COATED 1x19 WIRE	WHITE	EYE & THIMBLE, SMALL SHACKLE	3.4 m 11 ft	EYE & LARGE OVAL THIMBLE
12 STD	ADJUSTABLE LAZY JACK LINE	1	5/16" (8mm)	LS	WHITE	BARE	18.3 m 60 ft	BARE

HUNTER
 H-310 RUN, RIG, SPECS
 EXCEL306\CALC\PR3091.XLS

RUNNING RIGGING SPECIFICATIONS

OPT/STD		ITEM	QUANTITY	LINE SIZE	LINE TYPE	COLOR	END 1	LENGTH		END 2
1	STD	MAIN HALYARD	1	3/8" (9.5mm)	XLS EXTRA	BLUE	HEADBOARD SHACKLE	30.0 m	98 ft	BARE
2	STD	JIB HALYARD	1	3/8" (9.5mm)	XLS EXTRA	RED	EYE	27.0 m	89 ft	BARE
3	STD	MAIN TRAVELER LINE	2	5/16" (8mm)	LS	WHITE	SMALL EYE	5.2 m	17 ft	BARE
4	STD	MAINSHEET	1	3/8" (9.5mm)	XLS	BLUE FLECK	SMALL EYE	15.6 m	51 ft	BARE
5	STD	REEFING LINE #1	1	3/8" (9.5mm)	LS	GREEN FLECK	BARE	15.0 m	49 ft	BARE
6	STD	REEFING LINE #2	1	3/8" (9.5mm)	LS	RED FLECK	BARE	22.3 m	73 ft	BARE
7	STD	JIB SHEET	2	7/16" (11mm)	LS	RED FLECK	BARE	10.5 m	34 ft	BARE
8	OPT	SPINN. SHEET	2	3/8" (9.5mm)	LS	BLACK FLECK	BARE	21.0 m	69 ft	BARE
9	OPT	SPINNAKER HALYARD	1	3/8" (9.5mm)	XLS	BLACK	SNAP SHACKLE NF11000s	27.0 m	89 ft	BARE
10	STD	LAZY JACK WIRE	2	5/32" (4mm)	PLASTIC COATED 1x19 WIRE	WHITE	EYE & THIMBLE, SMALL SHACKLE	3.4 m	11 ft	EYE & THIMBLE, HARKEN 125 OR SCHAEFER 300-02
11	STD	ADJUSTABLE LAZY JACK LINE	2	5/16" (8mm)	LS	WHITE	BARE	9.3 m	31 ft	BARE

RUNNING RIGGING SPECIFICATIONS

BOAT: h310 FILE NAME: PR3091 REVISION: SHORTENED JIB SHEET 11/26/96
 BY: KJC DATE: 10/10/96
 CHECKED BY: DATE: SHORTENED MAIN HALY, CHANGE LAZY JACKS 12/10/96

OPT/STD	ITEM	QUANTITY	LINE SIZE	LINE TYPE	COLOR	END 1	LENGTH	END 2
1 STD	MAIN HALYARD	1	3/8" (9.5mm)	XLS EXTRA	BLUE	HEADBOARD SHACKLE	29.1 m	95 ft BARE
2 STD	JIB HALYARD	1	3/8" (9.5mm)	XLS	RED	EYE	27.0 m	89 ft BARE
3 OPT	MAIN TRAVELER LINE	2	5/16" (8mm)	LS	WHITE	SMALL EYE	5.2 m	17 ft BARE
4 STD	MAINSHEET	1	3/8" (9.5mm)	LS	BLUE FLECK	SMALL EYE	15.6 m	51 ft BARE
5 STD	REEFING LINE #1	1	3/8" (9.5mm)	TRACER	GREEN FLECK	BARE	15.0 m	49 ft BARE
6 STD	REEFING LINE #2	1	3/8" (9.5mm)	TRACER	RED FLECK	BARE	22.3 m	73 ft BARE
7 STD	JIB SHEET	2	7/16" (11mm)	LS	RED FLECK	BARE	9.0 m	29 ft BARE
8 OPT	SPINN. SHEET	2	3/8" (9.5mm)	LS	BLACK FLECK	BARE	21.0 m	69 ft BARE
9 OPT	SPINNAKER HALYARD	1	3/8" (9.5mm)	XLS	BLACK	SNAP SHACKLE NF11000s	27.0 m	89 ft BARE
10 STD	VANG	1	3/8" (9.5mm)	LS	WHITE	SMALL EYE	14.7 m	48 ft BARE
11 STD	LAZY JACK WIRE	2	5/32" (4mm)	PLASTIC COATED 1x19 WIRE	WHITE	EYE & THIMBLE, SMALL SHACKLE	3.4 m	11 ft EYE & LARGE OVAL THIMBLE
12 STD	ADJUSTABLE LAZY JACK LINE	1	5/16" (8mm)	LS	WHITE	BARE	18.3 m	60 ft BARE



h310 FURLING MAST RUNNING RIGGING SPECIFICATIONS

OPT/STD		ITEM	QUANTITY	LINE SIZE	LINE TYPE	COLOR	END 1	LENGTH		END 2
1	STD	MAIN HALYARD	1	3/8" (9.5mm)	XLS EXTRA	BLUE	HEADBOARD SHACKLE	30.0 m	98 ft	BARE
2	STD	JIB HALYARD	1	3/8" (9.5mm)	XLS	RED	EYE	27.0 m	89 ft	BARE
3	OPT	MAIN TRAVELER LINE	2	5/16" (8mm)	LS	WHITE	SMALL EYE	5.2 m	17 ft	BARE
4	STD	MAINSHEET	1	3/8" (9.5mm)	LS	BLUE FLECK	SMALL EYE	15.6 m	51 ft	BARE
5	STD	JIB SHEET	2	7/16" (11mm)	LS	RED FLECK	BARE	10.5 m	34 ft	BARE
6	OPT	SPINN. SHEET	2	3/8" (9.5mm)	LS	BLACK FLECK	BARE	21.0 m	69 ft	BARE
7	OPT	SPINNAKER HALYARD	1	3/8" (9.5mm)	XLS	BLACK	SNAP SHACKLE NF11000s	27.0 m	89 ft	BARE
8	STD	BOOM TOPPING LIFT	1	5/16" (8mm)	LS	WHITE	1/4" D-SHACKLE	25.6 m	84 ft	BARE

h310 B&R RIG WITH STRUTS DESCRIPTION

To understand how to tune the B&R rig, first you should be familiar with the various parts of a basic single spreader rig, something most sailors know a little about. It is comprised of six interconnected parts: mast, spreaders, upper shrouds, lower shrouds, backstay and forestay.

When the rig is correctly tuned, the mast will not bend sideways appreciably when under sail, though it may be raked and be bent fore and aft to suit the sails and sailing preference of the crew.

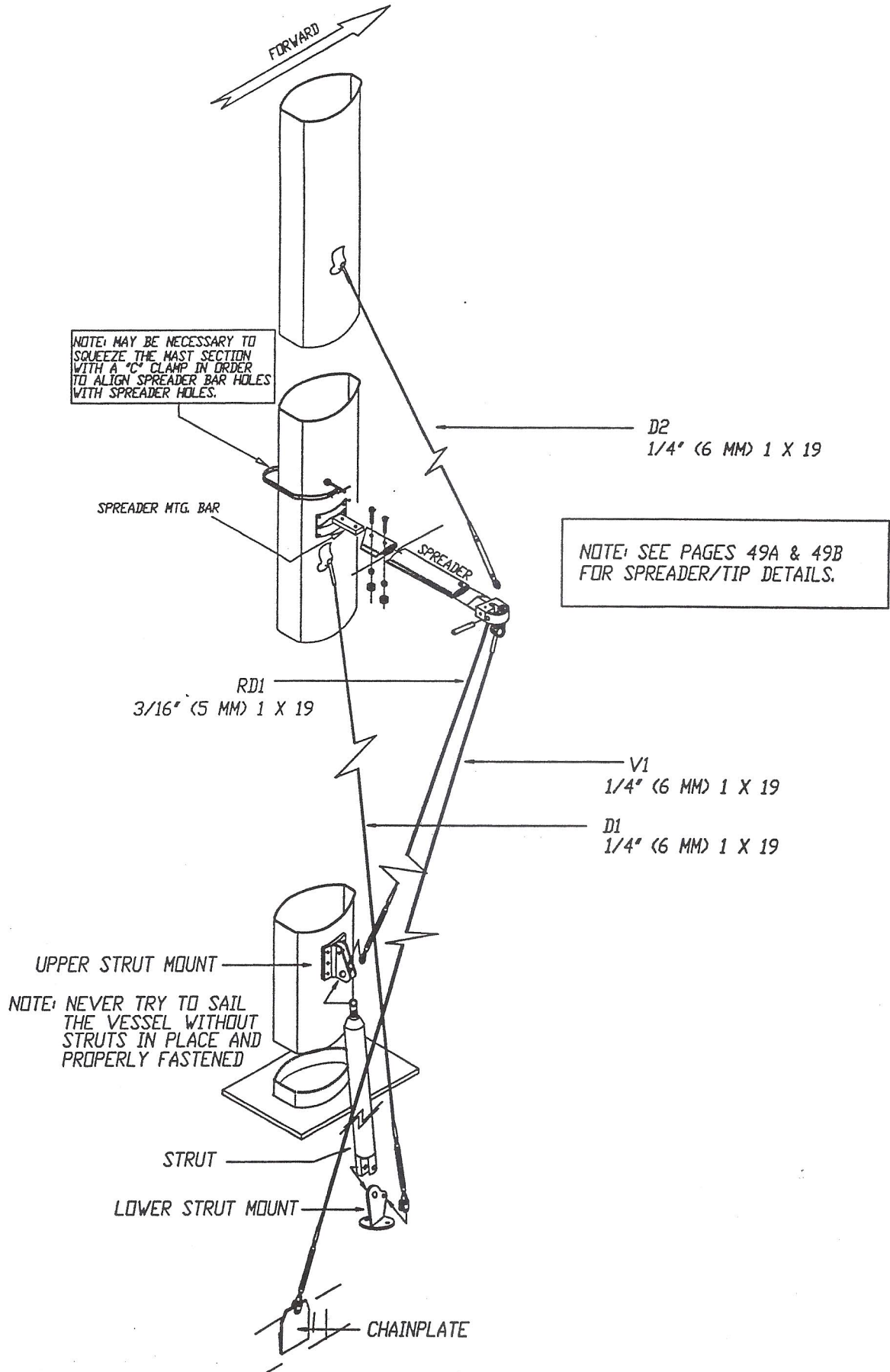
The lower shrouds, or D1 pull on the area near the spreader. The forestay and backstay position the mast fore and aft allowing you to rake the mast the desired amount.

An improvement on the single spreader rig, which allows you to use a smaller mast section, is to support the bottom of the mast by holding it in place with struts. The struts make a strong point where they attach and also serve as handholds making work on deck safer. By going to a smaller mast section it would normally be necessary to also support the mast fore and aft with additional rigging such as runners and

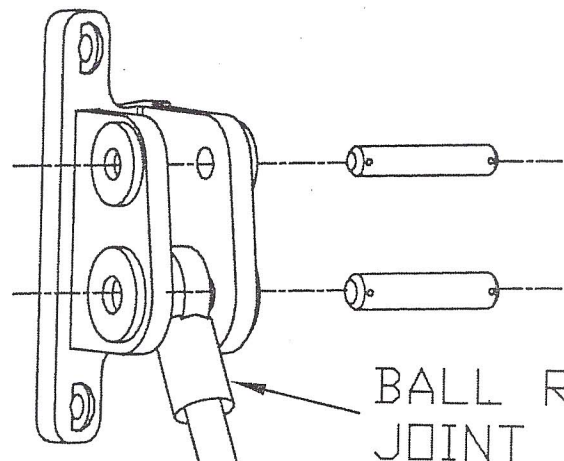
checkstays and inner forestays. To avoid the complication and inherent risk these additional items represent, Hunter uses the B&R rig which is as evenly supported fore and aft as it is sideways.

The B&R rig consists of aft swept spreaders and reverse diagonals which support the mast fore and aft thus combining the functions of inner forestays, checkstays, runners, and a backstay with their function as spreaders. With the B&R rig, no rigging has to be adjusted while sailing, thereby achieving a safe rig at all times. The performance minded skipper will benefit from the aerodynamic efficiency of the smaller mast section and the ability to make faster tacks because of the lack of running backs or inner forestays. The cruising sailor, who often sails with minimum crew, will enjoy the safety and comfort of not having to constantly move about the boat doing and undoing various parts of the rigging.

B&R rigging systems are on boats the world over: world cruisers and racers, OSTAR boats, 2 ton, 1 ton, 3/4 ton, 1/4 ton and multihulls — wherever one finds sailors who want performance and reliability.



STANDING RIG. ASSY.



BALL ROD JOINT

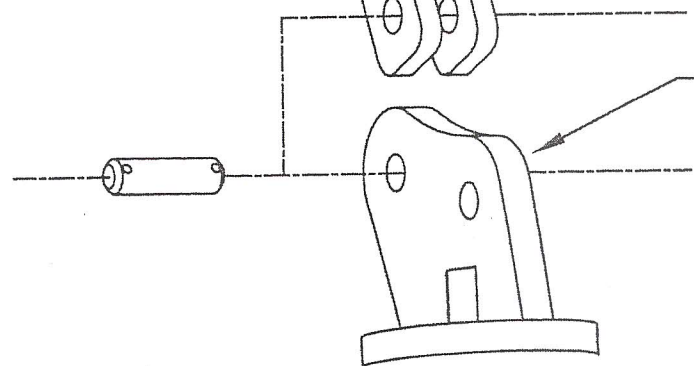
STEP TWO
ADJUST THREADS UNTIL BALL ROD JOINT IS ABLE TO BE EASILY PINNED IN STRUT BRACKET

STEP THREE
PIN BALL ROD JOINT AND TIGHTEN JAM NUT AGAINST END OF STRUT

JAM NUT

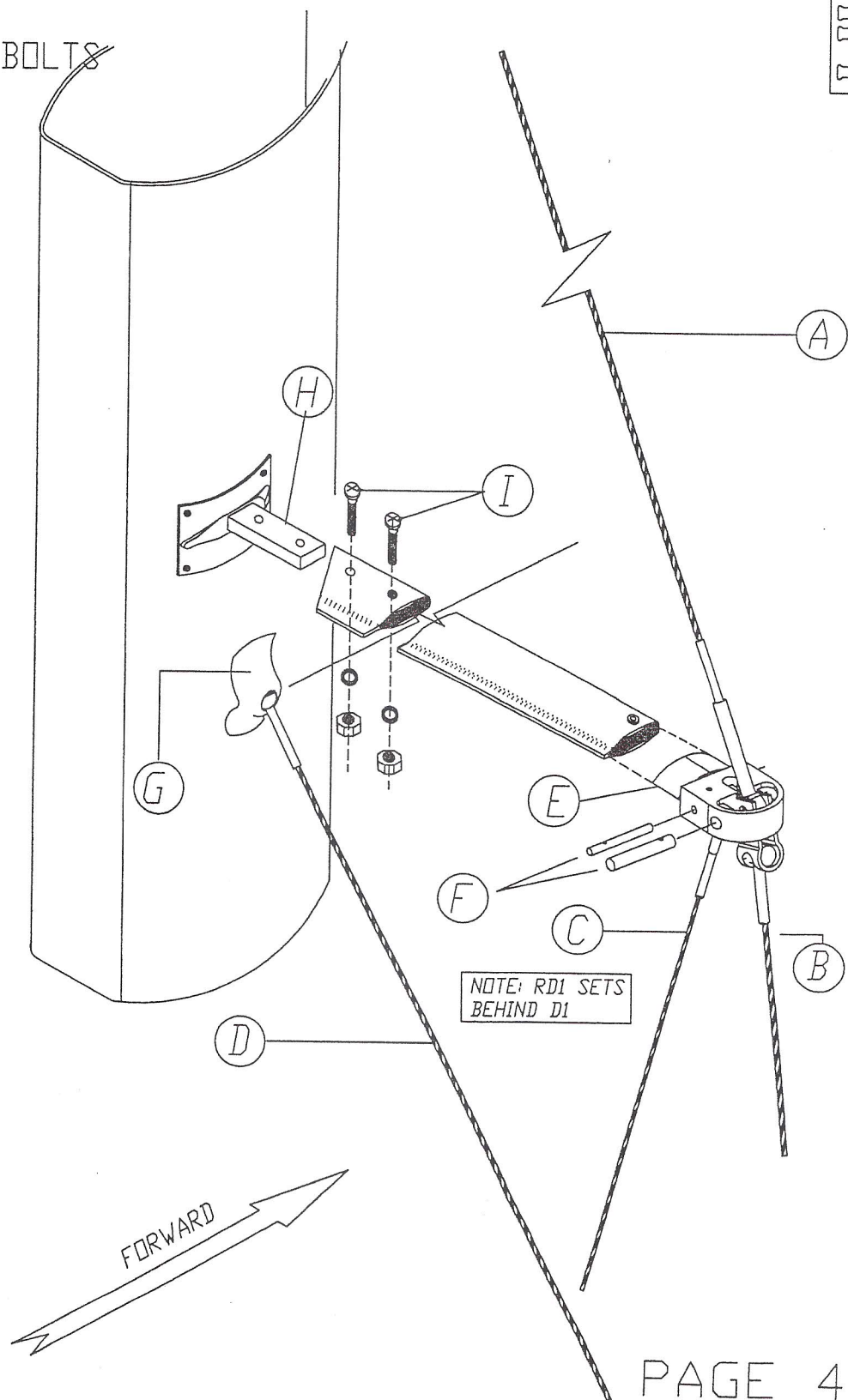
STRUT

STEP ONE
PIN LOWER END OF STRUT TO CHAINPLATE AND ADD SPLIT RINGS

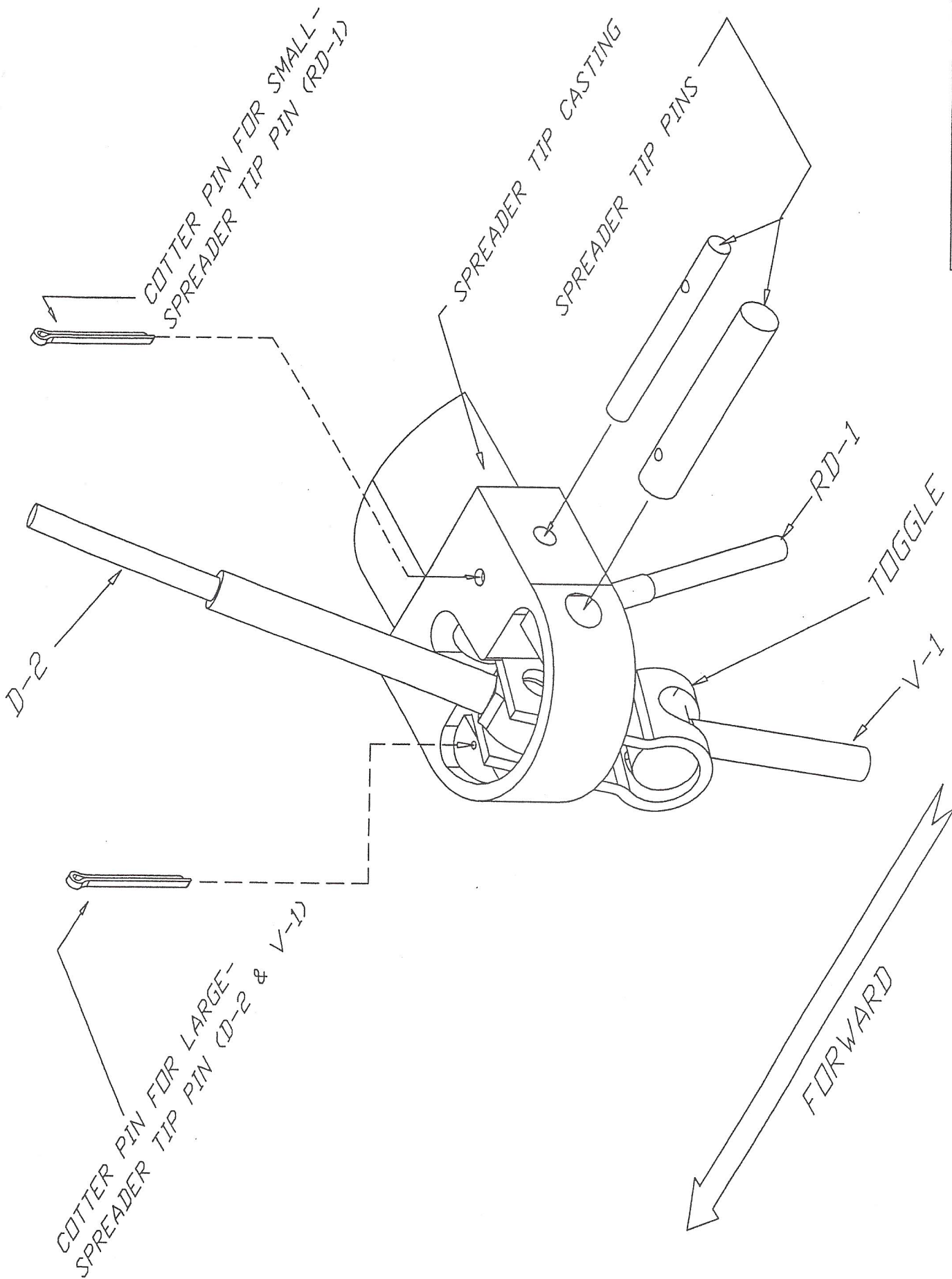


LOWERS CHAINPLATE

- (A) UPPER DIAGONAL (D2)
- (B) VERTICAL (V1)
- (C) REV. DIAG. (RD1) MARINE EYE
- (D) LOWER DIAG. (D1)
- (E) SPREADER TIP CASTING
- (F) SPREADER TIP PINS
- (G) BACKING SHELL
- (H) SPREADER BAR
- (I) SPREADER BAR BOLTS



SPREADER DETAIL



SPREADER TIP DETAIL

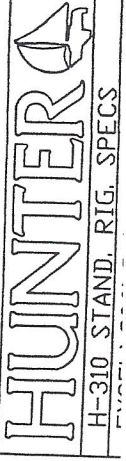
STANDING RIGGING

ITEM	QTY.	WIRE SIZE	LENGTH	UPPER END FITTING	LOWER END FITTING
D2	2	1/4" (6mm)	14'-1 1/2' (4305mm)	STEMBALL W/ BACKING SHELL	HF JAW TOGGLE
V1	2	1/4" (6mm)	24'-7" (7495mm)	MARINE EYE	8-12-12 TURNBUCKLE W/ JAW TOGGLE
RD1	2	3/16" (5mm)	16'-11 1/2" (5170mm)	MARINE EYE	7-10-10 TURNBUCKLE / STEMBALL / BACKING SHELL
D1	2	1/4" (6mm)	23'-11" (7290mm)	STEMBALL W/ BACKING SHELL	8-12-12 TURNBUCKLE W/ HF JAW TOGGLE
H/S	1	1/4" (6mm)	40' 1 1/2' (12230mm)	HF JAW W/ 12mm PIN	FURLEX ADJUSTER W/ 12 mm PINS IN TOGGLE

h310 STANDING RIGGING SPECIFICATIONS

BY: KJC		DATE: 29-Apr-97		REVISION: 4/29/97 lengthen RD1 1" for lower strut brkt		
OPT/STD	ITEM	QUANTITY	WIRE SIZE	UPPER END	LENGTH	LOWER END
1	D2	2	7/32" (5.5mm) 1x19	STEMBALL, BACKING SHELL	4.718 m 15 ft. 5 3/4 in.	MARINE EYE
2	V1	2	1/4" (6.4mm) 1x19	JAW TOGGLE	7.398 m 24 ft. 3 1/4 in.	8-16-16 TURNBUCKLE
3	D1	2	1/4" (6.4mm) 1x19	STEMBALL, BACKING SHELL	7.264 m 23 ft. 10 in.	8-12-12 TURNBUCKLE
4	LOWER DIAMOND, RD1	2	1/4"(6.4mm) 1X19	MARINE EYE	5.632 m 18 ft. 5 3/4 in.	6-10-10 STEMBALL TURNBUCKLE WITH JAW TOGGLE
5	FORESTAY	1	N/A	OS.JAW TOGGLE w/ 7/16" PINS	0.000 m 0 ft. 0 in.	

CURRENT Hull # 181



TUNING THE h310 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.

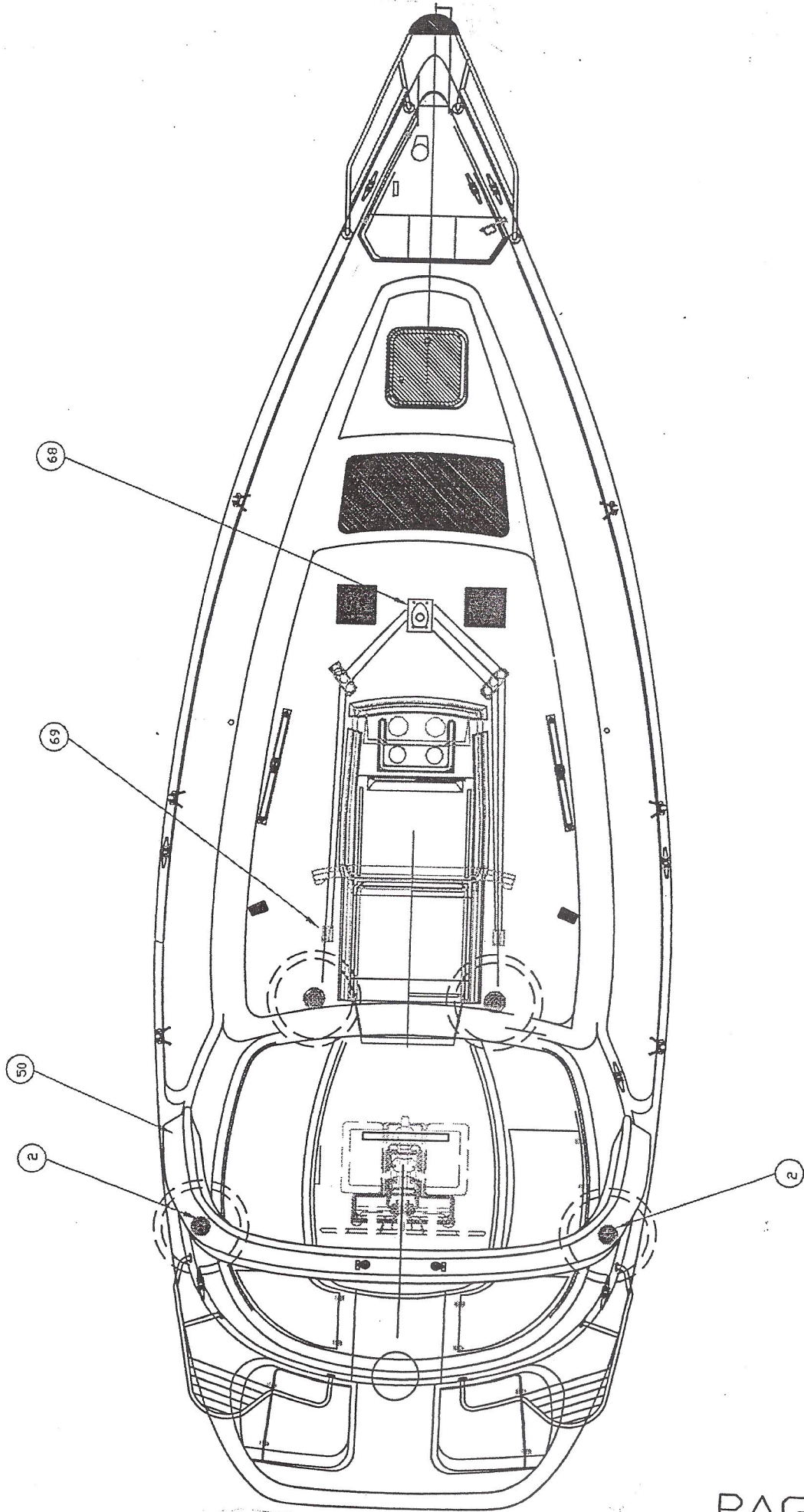
1. Start with all the rigging slack. Then induce the mast bend by tightening the reverse diagonals (diamonds). Measure the bend by tensioning a line or the main halyard between the masthead and the gooseneck. The maximum amount of bend should be no more than 5" measured perpendicular from the aft face 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. 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 2-1/2' 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' to 1-1/2' 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.
5. 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. 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
7. The final test is to go sailing in 10-15 knots of wind. First, adjust the tension in the shrouds. 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 spreader and then hooks to the windward side then you will have to tighten the lower shroud. 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.
8. At this point you should have adequate headstay tension. The sails are built for about 9" of headstay sag, the bend in the mast should be about 5" fore and aft and it should be nearly straight from side to side

TUNING THE h310 B&R RIG

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.

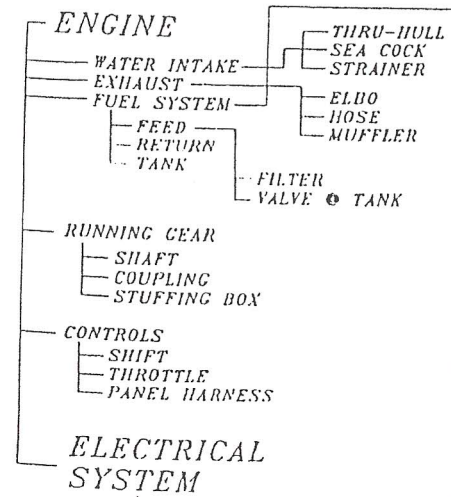
9. Once the rig is tuned you should make sure to add the cotter pins to all the rigging bending back the ends and taping them to prevent snagged lines sails and fingers.

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.

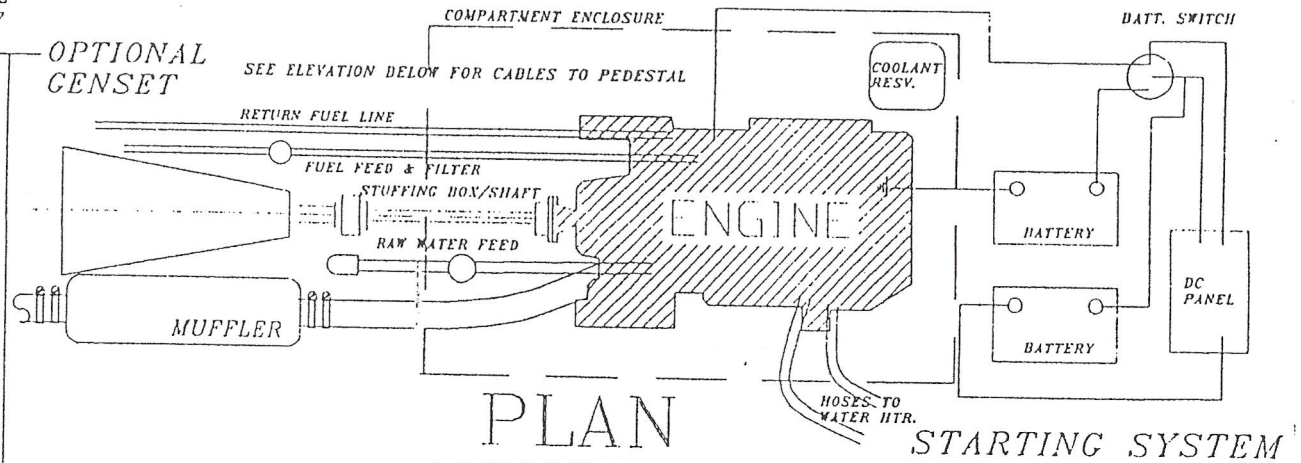


OPTIONAL SPINNAKER LAYOUT

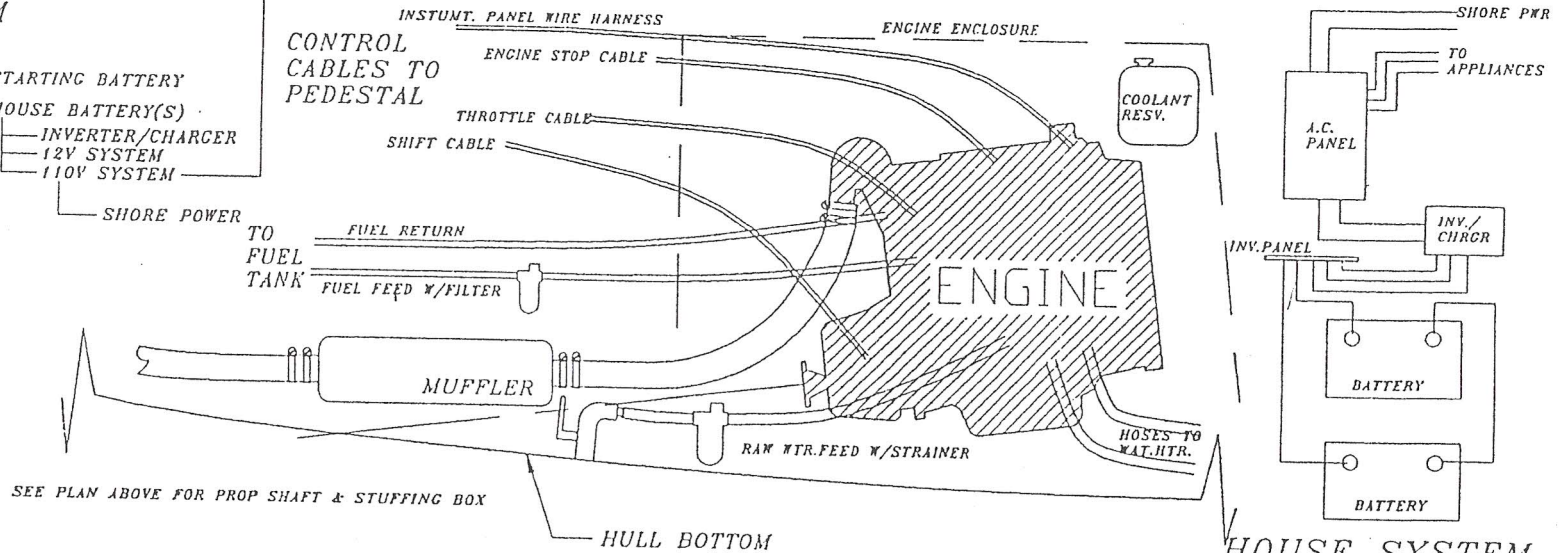
SYSTEMS SCHEMATIC



OPTIONAL GENSET



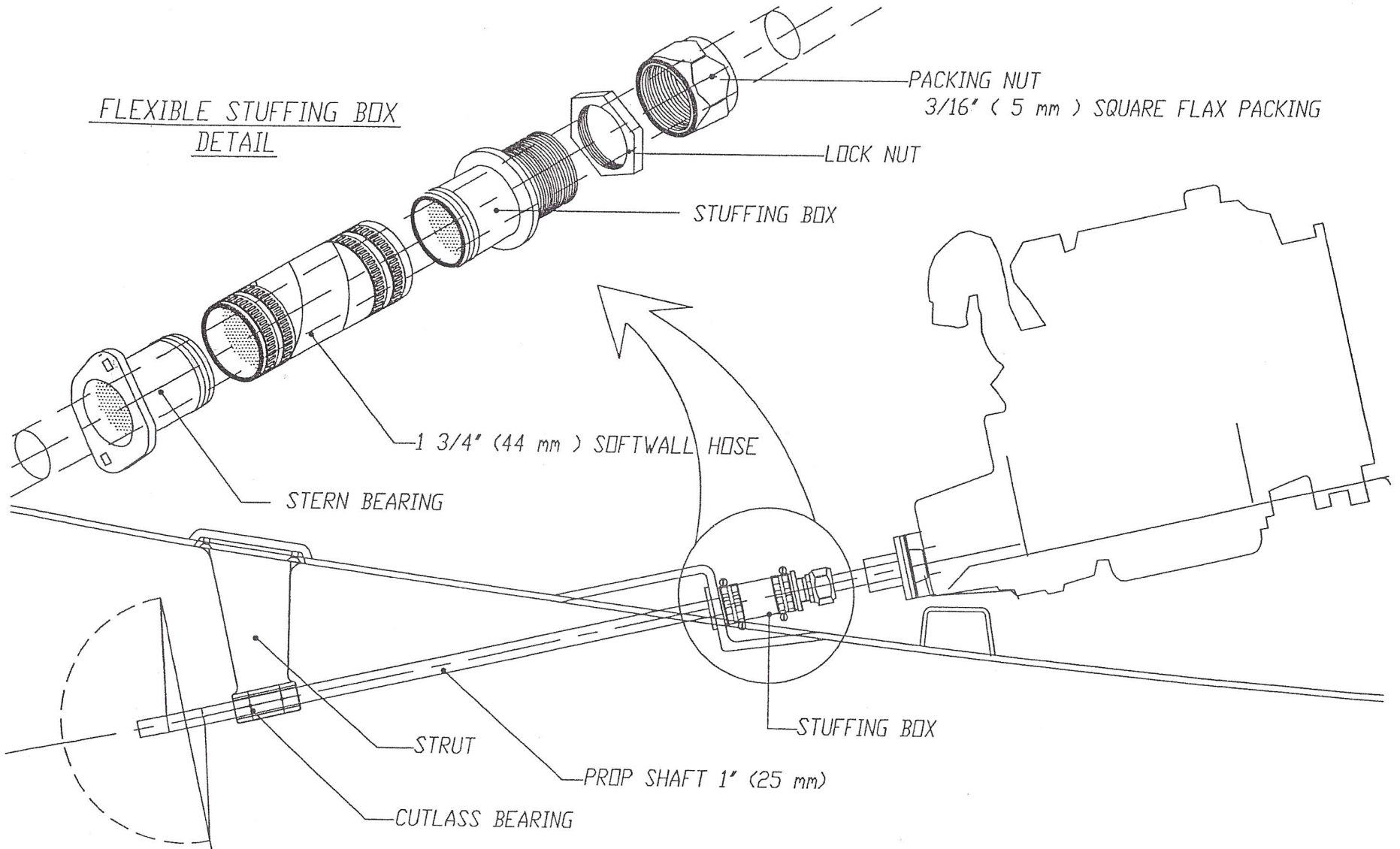
CONTROL CABLES TO PEDESTAL



SEE PLAN ABOVE FOR PROP SHAFT & STUFFING BOX

ENGINE COMP. LAYOUT

FLEXIBLE STUFFING BOX
DETAIL



NOTE:

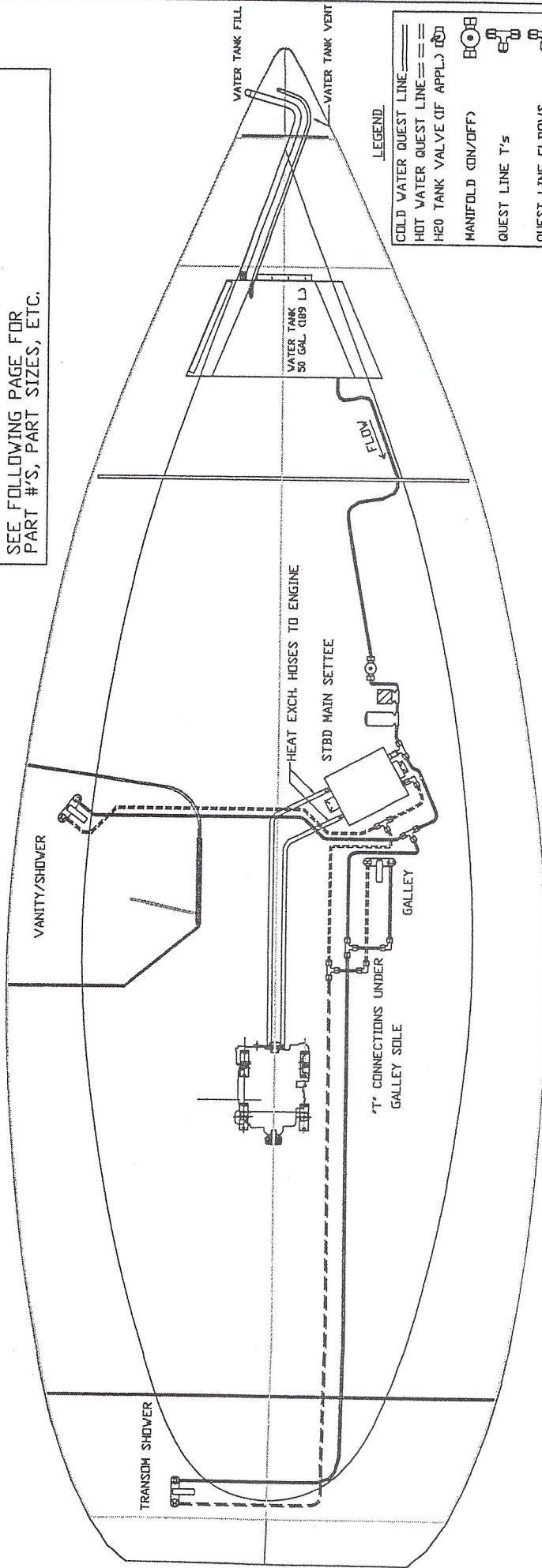
SEE PAGE 60A FOR SPECIFIC-
SEACOCK / THRUHULL / DECK FITTING LOCATIONS

SEE PAGE 60B FOR SPECIFIC-
SEACOCK / THRUHULL / DECK FITTING ASSEMBLY

SEE PAGE 64D FOR SPECIFIC-
WATER PUMP WIRING LAYOUTS

SEE PAGE 63A FOR SPECIFIC-
WATER HEATER WIRING LAYOUTS

SEE FOLLOWING PAGE FOR
PART #'S, PART SIZES, ETC.



LEGEND:

	COLD WATER QUEST LINE
	HOT WATER QUEST LINE
	H2O TANK VALVE (IF APPL.)
	MANIFOLD (ON/OFF)
	QUEST LINE T'S
	QUEST LINE ELBOWS
	FAUCETS/SHOWERS
	WATER PRESSURE PUMP
	WATER FILTER

HUNTER

H-310 H2O SPECIFIC
DRAWING # 3108057A

POTABLE WATER SYSTEM (310 MODEL)

HUNTER PART #'S

WATER HEATER 6 GAL. (23 L.).....PLD280
 WATER PUMP.....PLD301
 WATER FILTER.....PLD350
 TANK VALVE.....PL1815
 COCKPIT SHOWER.....PLD189
 GUEST LINE 1/2" (12.7 MM).....PL1825
 GUEST LINE NUTS.....PL1820
 GUEST LINE T'S.....PL1830
 GUEST LINE ELBOW.....PL1853
 WATER DECK FILL 1 1/2" (38.1 MM) PL1130
 1-1/2" (38.1 MM) SHIELD VAC HOSE.....PL1140
 1-1/2" (38.1 MM) HOSE CUFF.....PL1500
 TANK VENT FITTING.....PLD520
 3/4" (19.1 MM) SHIELD VAC. HOSE.....PL1450
 3/4" (19.1 MM) HOSE CUFF.....PL1480
 WATER TANK.....SPECIFIC TO BOAT MODEL
 FAUCETS.....SPECIFIC TO BOAT MODEL
 SENDING UNITS.....SPECIFIC TO BOAT MODEL

NOTE:

SEE PAGE 60A FOR SPECIFIC-
 SEACOCK / THRUHULL / DECK FITTING LOCATIONS
 SEE PAGE 60B FOR SPECIFIC-
 SEACOCK / THRUHULL / DECK FITTING ASSEMBLY
 SEE PAGE 64D FOR SPECIFIC-
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