

## 24 Securing Boat at Santee Basin

B - Bow aligned with yellow mark.  
B - Bowlines thru chock, crossed, cleated.  
B - Inner forestay & halyard to foredeck.  
B - Jib halyards to bow shackles.  
B - Spinnaker halyards to base of 1<sup>st</sup> stanchion  
E - Return log book to cutter shed.  
E - Close all hatches and companionway.  
E - Confirm no reverse polarity  
E - Secure all 12V CB's except bilge alarm.  
E - Secure ship service and engine bat switch.  
E - Shore cable: connect boat then shore.  
E - Remove all trash.  
H - Engine T-handle in down position.  
H - Furl ensign in aft end of boom.  
H - Report all discrepancies to Cutter Shed.  
H - Verify dock lines in place.  
H - Wheel dampener snugged.  
H - Wheel, compass, instr covers in place.  
M - Coil reef lines and hang.  
M - Cowls face forward except 2 on transom.  
M - Main flaked over boom, battens on boom.  
M - Return winch handles.  
M - Sail ties and cover in place.  
M - Spring lines thru chock, pr winch, cleated.  
S - Bleed backstay pressure to 500 psi.  
S - Boom level with outhaul eased.  
S - Sheets, guys, and lines in port locker.  
S - Stern lines crossed, thru chock, cleated.  
S - Traveler extreme to side opposite pier.  
S - Winch handles in hernia box, strbd locker.  
**B=Bow, E=Eng., H=Helm, M=Midship, S=Sterm**

## Navy 44 Sailing John C. Kelly, 2003

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## 2 System Check & Engine Start

1. Engine hrs.	RECORD
2. Batteries	CHECK
3. Fuel level	CHECK
4. AC CB's	OFF
5. Shore power	DISCONNECT
6. Engine oil	CHECK
7. Belt tension	CHECK
8. Transmission oil	CHECK
9. Racor filter	CLEAR
10. Sea water strainer	CLEAR
11. Raw water intake valve	OPEN
12. Fuel valves	OPEN
13. Bilge	CHECK

### Pre-Start

1. DC CB (main, Start bat alt, SS bat alt, instr lights)	ON
2. Start battery Perko	ON
3. SS battery Perko	Both
4. Bilge blower (30 seconds)	ON
5. Engine Alarm	ON

### Start

1. T-handle	DOWN
2. Clutch button	OUT
3. Throttle	ADVANCE
4. Pre-heat (10-20 seconds)	DEPRESS
5. Both Pre + Start (<15 sec)	DEPRESS

### Post-Start

1. Water discharge	YES
2. Oil pressure 30-50 psi	YES
3. Water temp <200°	YES

## Rules of the Road 23

<u>Stand-On</u>	<u>Give-Way</u>
Starboard tack	Port tack
Leeward boat	Windward boat
RED light	GREEN light
Being overtaken	Overtaking

### Sound Signals Inland

•	Pass port-to-port (turn right)
	Overtake on my port side
• •	Pass starboard-to-starboard (left)
	Overtake on my starboard side
• • •	Backing
• • • • •	Danger, Doubt
—	Leaving dock
—	Warning on bend

### Running Lights (112.5°)

RED	= Port (like port wine, from right)
GREEN	= Starboard (from left)

### Masthead Lights (225°)

W	Power
WW in range	Power >50m
WW	Towing <200m
WWW	Towing >200m
R or G w/o W	Sailboat
WR	Pilot (pilot ahead)
GW / RW	Trawling / Fishing (tonight)

### Stern (135°)

W	All boats
WY	Towing international
YY	Towing inland

## 22 Returning to Basin

**Crew (all hands): bow(2), spring(2), stern(2), fender, boat hook, comm.**

1. Helm: head into wind.
2. Crew: lower headsail, lower mainsail.
3. Crew: secure and stow sails.
4. Helm: assess wind conditions for docking, determine windward side, advise crew.
5. Helm: make plan, assign crew, discuss plan
6. Helm: test reverse.
7. Comm: request permission to enter basin.
8. Boat hook: stand on windward side in front of shrouds, grab stern then spring.
9. Bow1: request help from quay to retrieve lines, or jump onto pier and pass line to Bow2.
10. Bow2: show distance from yellow mark with spread of arms overhead. May need to pull boat forward and ease springs.
11. Spring: bring line through chock to primary winch, stop forward motion.
12. Stern: under rear pulpit to cleat, center boat.
13. Crew: use cleats and winches to muscle boat.
14. Stern: cross lines after boat is secure.
15. Bow: cross lines after boat is secure.

### **Debrief**

1. Lessons Learned.
2. Suggestions for next session.

## Getting Underway 3

**Crew (4+): Helm, Eng., Comm., Nav, Supply, line handlers**

1. Coach: rotate positions.
2. Eng: system checks and pre-start.
3. Nav: prepare to brief crew
4. Supply: inventory check
5. Comm: lesson to weather of VHF.
6. Comm: VHF to scan 9, 13, 16, 82A.
7. Helm: backstay pressure to 2000 psi.
8. Helm: Secure life jacket to pedestal.
9. Helm: Break National Ensign.
10. Helm: verify instruments.
11. Coach: Pre-sail brief.
  - Weather: wind, waves, tide
  - Mission: training objectives
  - Sail configuration
  - Navigation: route, charts, buoys
12. Helm: assign line handlers.
13. Helm: review departure procedure.
14. Helm: Position line handlers.
15. Helm: **“TAKE LINES IN HAND”**
16. Comm: permission to depart basin.
17. Helm: **“BACKING.”**
18. Line handlers: cast lines as appropriate.
19. Helm/Eng: post-start checks.
20. Bow: call **“CLEAR”** as leaving basin.

<u>Sail</u>	<u>Wind</u>	<u>Trk/Pos</u>	<u>Main</u>
#1	0-12	A3R	Full
#2	0-18	Sntch.	Full, 1R
Staysail	0-18	F5F	Full, 1R
#3 (work.)	16-30	F5R	Full, 1R, 2R
#4	30-35	F5F	2R
Storm.	35+	Snatch.	2R
Storm try	35+	Spr. to sec. winch	

*A = Aft track, F = Fore track*

### Sheet Leads

**#1** outboard all shrouds

**#2** outboard shrouds and lifelines to snatch block near primary winch (just aft of stanchion), then to primary winch via foot block.

**#3, #4** outboard fwd. shrouds and inboard lower and aft shrouds.

**Storm jib** outboard all shrouds to snatch block just aft of midship stanchion.

**Storm main trysail** sec winch via spreader block.

### WEAR HARNESS – CLIP ON

**Do not rig the inner forestay without rigging the running backstays.**

**Crew (4): Bow1 (Deck Chief), Bow2, Pit1, Pit2**

- Helm: “**PREPARE STORM JIB.**”
- Bow1: rig inner forestay.
- Bow2: hold down storm jib.
- Crew1: large snatch blocks just aft of midship stanchion.
- Pit2: attach small snatch blocks near primary winches.
- Pit2: rig running backstays inboard lifelines to sm. snatch blocks, then to primary winches (only windward backstay is tensioned).
- Bow1: hank on jib to inner forestay.
- Bow1: attach topping-lift to jib head.
- Pit1: lead sheets outbd shrouds, to large snatch blocks, then to primary winches, via foot blocks.
- Bow1: “**READY**”
- Helm: “**HOIST THE STROM JIB**”
- Bow1: raise jib halyard.
- Bow2: Grind, call
- Pit2: tension sheet, trim to course

## 20 Storm Trysail

### WEAR HARNESS – CLIP ON

**Crew (4): Mast (Deck Chief), Halyard, Boom, Pit**

1. **“PREPARE TO HOIST TRYSAIL”**
2. Mast: connect tackline (line from trysail tack) to ram’s head. Tackline prevents trysail from running off top.
3. Mast: Start luff of trysail into trysail track on port side of mast. Keep sail bunched so wind does not grab it.
4. Boom: with help, lower and lash mainsail.
5. Boom: Tension boom vang.
6. Pit: connect block & tackle between aft bale on boom and toe rail (to immobilize boom). Tension, snug but not too much.
7. Pit: move traveler to same side as boom.
8. Pit: lead sheets via spreader blocks to secondary winches.
9. Mast: shift halyard from main to trysail.
10. Mast: **“READY.”**
11. Helm: **“HOIST STORM TRYSAIL.”**
12. Halyard: hoist trysail.
13. Pit: trim both sheets to centerline so that it is “self-tending” when boat is tacked.

## Hoisting Sails

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**MAINSAIL – Crew (4): halyard (deck chief), grinder, tailer, mainsheet**

1. **“PREPARE TO HOIST MAINSAIL”**
2. Helm: head boat into wind
3. Halyard: secure halyard to sail head
4. Halyard: check Cunningham and out haul
5. Halyard: ease reef lines, mainsheet, vang
6. Halyard: **“READY”**
7. Helm: **“HOIST MAINSAIL”**
8. Halyard: Jump/hoist, grind, tail
9. Tailer: calls **“HIGH”**
10. Tailer: secure and coil halyard
11. Mainsheet: Trim mainsheet to course
12. Halyard: Cunningham, outhaul, reef lines

**HEADSAIL – Crew (4): Hank(tailer), halyard (deck chief), grinder, jib sheet**

1. **“PREPARE TO HOIST HEADSAIL”**
2. Halyard: run jib sheets and connect to clew
3. Hank: jib to forestay starting with tack
4. Hank: connect halyard to jib head
5. Halyard: **“READY”**
6. Helm: **“HOIST HEADSAIL”**
7. Halyard: Jump/hoist, grind, tail
8. Tailer: calls **“HIGH”**
9. Tailer: secure and coil halyard
10. Jib Sheet: grind, tail, trim

**If you feel resistance: STOP!**

**Crew (3): breaker, grinder, tailer**

1. Helm: "READY ABOUT."
2. Port: "PORT READY"
3. Starboard: "STBRD READY"
4. Helm: "HELM's A'LEE."
5. Breaker: "BREAK."
6. Tailer: "MADE" when trimmed

**Jibing****Crew (4): breaker (preventer), grinder, tailer (preventer), main**

1. Helm: "PREPARE TO JIBE."
2. Port: "PORT READY"
3. Starboard: "STRBRD READY"
4. Main: "MAIN READY"
5. Breaker: "PREVENTER FREE"
6. Helm: "BEARING AWAY."
7. Helm: "CENTER THE MAIN"
8. Main: "MAIN CENTERED"
9. Helm: "JIBE HO" pass through wind.
10. Main: ease sheet quickly
11. Break, grind, and tail as in tack
12. Tailer: secure new preventer

Draft	7.5 ft (2.3 m)
LOA / LWL	44 ft (13.4 m) / 34.5 ft
Beam / height	12.5 ft / 65 ft (19.0 m)
Displacement	27, 654 lbs (12.4 tons)
Water	163 gal (70/70/23)

**Engine / Electrical**

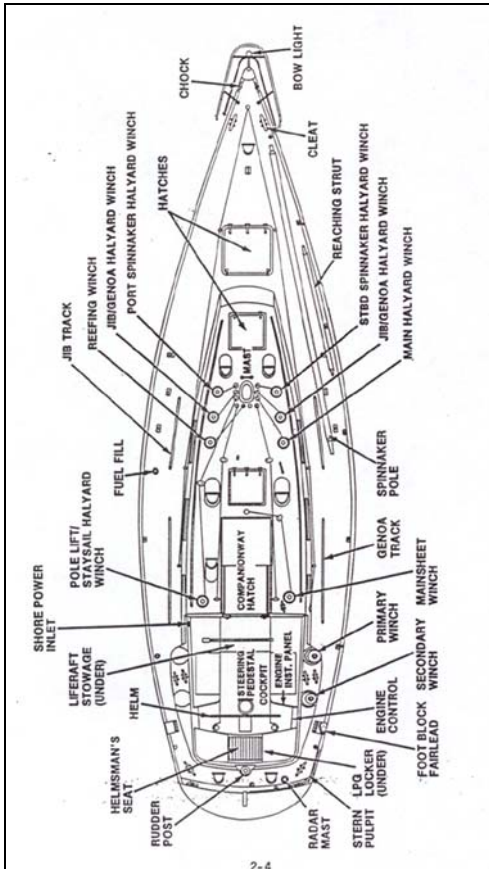
Westerbeke Diesel	4 Cyl, 37 HP
Diesel fuel #2	50 gal, 45 avail
Antifreeze	50/50
Oil pressure	30-60 psi
Water temp	180°
Batteries low/full	12.3 / 13.5 amps
RPMs idle/cruise/max	1000/1800/2500

**Audio Alarms**

1. Engine oil pressure low
2. Engine water temp high
3. Water in fuel (Racor)
4. Bilge water level high

**Cruising Distance**

45 gal ÷ 0.8 gph = 56 hours  
 56 hours \* 6 mph = 336 nautical miles



- Place **small snatch-blocks** at toe rail just aft of bow pulpit.
- Run shackle end of lines from cockpit forward inside shrouds, to snatch blocks, then aft, outboard everything.
- You can temporarily connect shackle to lower lifelines aft of shrouds until needed.
- In the cockpit, run the preventer line directly to the secondary winch (not through a foot block). See below when a spinnaker is in use.
- To activate, connect snap shackle to boom-mounted line; disconnect shock cord from boom when the preventer is in use.

**With Spinnaker:** Use the primary winch or **preferably a cleat** for the preventer. The secondary winch will be in use by the spin sheet. The spin guy will be “lazy” on preventer side, so the spin and guy could share primary winch, but it is a bit of a pain. Note that the spin pole and the boom will be on opposite sides.

## 8 Taking a Reef

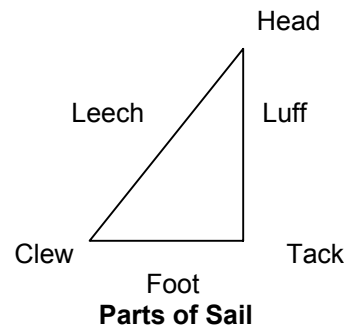
Reef 1, green tick on starboard side  
Reef 2, red tick on port side (like lights)

### Crew (4): mast (deck chief), halyard, sheet, reef line

1. Wear harness and clip on.
2. Helm: "**PREPARE TO TAKE # REEF.**"
3. Mast on windward side: Position deck crew.
4. Halyard: prepare to drop.
5. Reef: check line, put turns on wench.
6. Main: vang and mainsheet free to run.
7. Mast: "**READY TO REEF.**"
8. Helm: "**TAKE THE REEF.**"
9. Sheet: luff the main and ease vang.
10. Halyard: lower main with turns on winch.
11. Mast: fasten cringle, call "**CRINGLE MADE.**"
12. Reef: tension reef line, secure clutch.
13. Main: call "**REEF MADE**" when reef tight.
14. Reef: secure reef clutch.
15. Mast: make sure cringle stays on.
16. Halyard: trim main halyard after reef made.
17. Mast: call "**MAIN HIGH**" when main raised.
18. Halyard: secure halyard.
19. Mast: call "**REEF COMPLETE.**"
20. Main: trim to course.
21. Coil and tidy up lines.
22. Pull excess sailcloth to windward.
23. Use sail ties to secure above boom.
24. Secure new clew to boom with sail tie.

## Terminology

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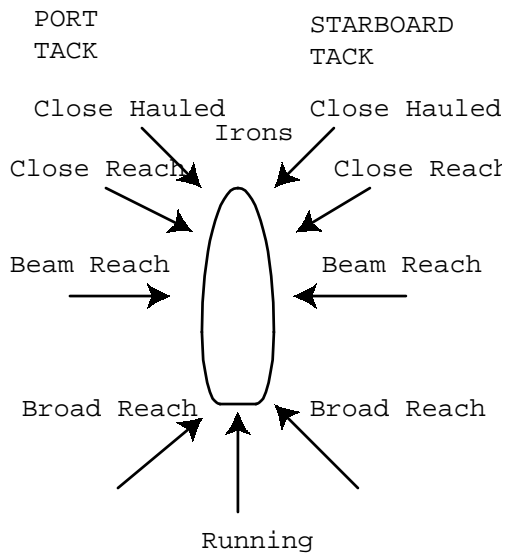


**Rigging:** headstay, backstay, collapsible inner forestay, running backstay, shrouds, spreaders, life lines, stanchion

**Blocks:** turning (foot) blocks, spreacher blocks, small snatch blocks, large snatch blocks, sheave, fairlead, cheeks, block and tackle

**Miscellaneous:** shackle, clevis pin, snap shackle, spring shackle, winch handle, cringle, reefing hook, boom vang, chock, cleat

## Points of Sail



**Pinching:** Entering NO GO zone.

**Beating** Sailing close hauled.

**Harden Up:** Sail closer to wind.

**Bearing Away:** Sail away from wind.

**Irons = No Go = No Sail = Dead Zone**

## Shaking a Reef

**Crew (4): mast (deck chief), halyard, sheet, reef line**

- Helm: "**PREPARE TO SHAKE THE REEF**"
- Mast (windward side): position deck crew
- Halyard: un-cleat "**READY HALYARD**"
- Reef: release clutch and free line
- Main: Prepare/free halyard
- Mast: "**DECK READY**"
- Helm: "**SHAKE THE REEF**"
- Sheet: ease sheet to luff main
- Halyard: ease halyard until cringle is free
- Reef: ease reef line
- Mast: unhook cringle, "**CRINGLE FREE**"
- Halyard: raise halyard
- Mast: call "**MAIN HIGH**"
- Sheet: trim to course
- Coil and tidy lines

**1<sup>st</sup> Reef = 75%**

**2<sup>nd</sup> Reef = 50%**

## 10 Folding Headsails

1. Leave hanks on when taking down.
2. Attempt to flake on way down.
3. Or flake on deck with hanks on.
4. Keep all hanks together stacked on luff from tack to head.
5. Head should fold down to tack..
6. Use wide flakes to minimize thickness.
7. Roll **tightly** from clew toward luff.
8. Take hanks off after beginning to roll.

### Verbal Signals

<b>TRIM</b>	Adjust sail to current course
<b>EASE</b>	Let out sail, line, halyard Rotate index finger down
<b>TAKE</b>	Take in sail, line, halyard Rotate index finger up
<b>TENSION</b>	As on halyard, sheet, bcksty Preferred over “take in slack”
<b>HOLD</b>	Temporarily stop action Closed fist
<b>MADE</b>	Connection has been made Thumbs up
<b>HIGH</b>	Halyard is high, sail is trimmed Thumbs up
<b>BREAK</b>	Jib sheet is released during tack

## Sail Trim

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1. Trim from front to back.
2. When in doubt let it out.
3. Let the tell tales talk to you.
4. Depower by easing main sheet.
5. Beam reach is fastest point of sail.
6. Close reach – trim in.
7. Broad reach – ease out.
8. Avoid excessive heel.

### Sail Controls

#### Mainsail

- Main sheet – angle to wind, heel, & twist
- Traveler – angle to wind and heel
  - Light Winds < 10 kts Windward
  - Moderate 10 - 15 kts Centered
  - Heavy > 15 kts Leeward
- Boom vang – keeps boom down, sail twist
- Cunningham – luff tension, draft forward
- Outhaul – foot tension, draft in lower third
- Leech line – leech tension, curve/draft of sail

#### Jib

- Jib sheet – angle to wind, heel, & twist
- Jib fairleads – leech tension, draft
- Halyard – luff tension, draft

## 14 Man Over Board

**Crew (all hands): skipper, spotter, nav, halyard, main, crew**

1. Spotter: “**MAN OVERBOARD, ALL HANDS ON DECK**”
2. Spotter: keep victim in sight, continually call out position, move as needed to see victim
3. Skipper: “**ALL HANDS ON DECK**”
4. Skipper: assign positions according to strength
5. Skipper/Helm: note landmarks for bearing, heave flotation aids, throw OSCAR signal flag
6. Nav: mark position, take bearings
7. Helm: start engine, initiate quick stop
8. Prepare swimmers to enter water.
9. Prepare lines to hoist victim.

### **Quick Stop Procedure**

1. Helm: turn through wind as if heaving to. Back winded jib will slow boat. Sail past OSCAR to approach upwind.
2. Halyard: douse headsail when downwind.
3. Helm: Execute jibe “**JIBING**”, “**JIBE HO**”
4. Helm: head up to OSCAR, 45-60° to wind, on leeward side of boat.
5. Main: ease mainsail to slow speed.
6. Crew: push boom to wind to stop boat.

## Changing the Headsail 11

**Done while tacking, “bald headed”**

**Crew (4): deck chief, halyard, hank, sheet**

1. Helm: “**PREPARE TO CHG HEADSAIL.**”
2. Deck Chief: Lead new (or old lazy) sheet and attach to clew of new jib.
3. Deck Chief: hold new jib down.
4. Hank: Hank on new jib to weather and below lowest hank of working jib.
5. Halyard: eases halyard lines
6. Deck Chief: call, “**READY**”
7. Helm: “**TACKING, CHANGE THE HEADSAIL.**” Holds boat into wind so jib can be lower and new jib raised.
8. Sheet: Cast off working sheet.
9. Halyard: lowers halyard with at least 1 turn
10. Hank: un-hank working jib as sail comes down. Must work quickly.
11. Hank: shift halyard to new jib, “**MADE**”
12. Deck Chief: gather old jib on deck.
13. Halyard: hoist new jib; chief “**HIGH.**”
14. Sheet: trims working sheet.
15. Helm: completes tack.
16. Sheet: trim to course.
17. Deck Chief: attach lazy sheet to new jib.
18. Halyard and hank: stow old jib.

## 12 VHF Procedures

**Channels:** 12 – ship to shore  
13 – bridge to bridge  
16 – distress and hailing  
82A – Navy Santee Basin  
68, 69, 72, 78 – working channels

### Prowords – Brevity and Clarity

OVER	Finished, expect response
OUT	Finished, don't expect resp
ROGER	I heard you
WILCO	I heard you and will comply
SAY AGAIN	Repeat message
I SAY AGAIN	I am repeating
THIS IS	Identification
CORRECTION	Correct previous message
FIGURES	Stating numbers
I SPELL	Spelling name, etc.
AFIRMATIVE/NEGATIVE	Yes/No

### Hailing Protocol – Normal Operations

Dolphin, Dolphin THIS IS Fearless, Fearless  
Fearless THIS IS Dolphin  
Dolphin SWITCH TO 72  
FEARLESS switching to 72  
Conduct business on working channel 72  
Finish by saying: THIS IS Fearless OUT  
Never say OVER and OUT

## Lines

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**Mainsail:** halyard, sheet, reefing, topping lift, leech line, Cunningham, boom vang

**Jib/Genoa:** halyard, port/starboard sheets, lazy/working sheets

**Spinnaker:** halyard, sheets, guys, topping lift, downhaul, trip line

**Miscellaneous:** dock, rode, painter, jack, messenger (fore spring line goes foreword, after spring line goes back)

## Knots

Visualization + Finger Memory = Success

- Cleat a line – full turn, then lock
- Coil a line – braided - fig 8, laid - oval
- Bowline – jib sheets
- Slipped bowline – reef line on boom
- Clove hitch – blocks/fenders to life lines
- Figure eight – stopper knot with long tail
- Stevedore – stopper knot
- Slipped reef knot – sail ties
- Round turn & 2 half hitches
- Rolling hitch – take load off line
- Sheet bend – attach 2 lines (small to big)