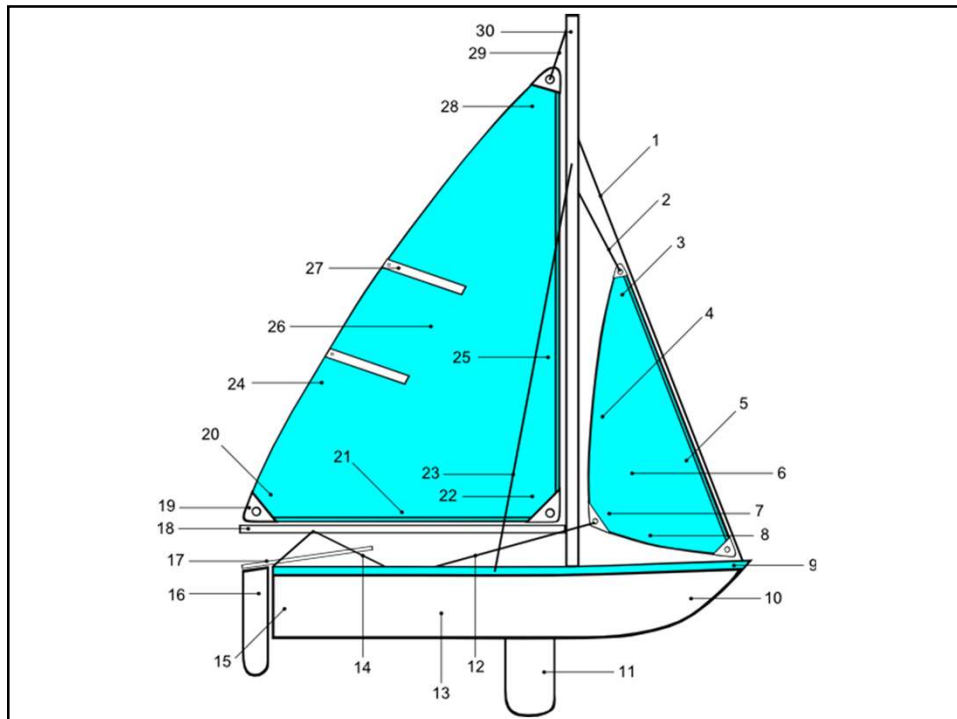


**Introduction to  
Sailing  
March 13, 2023**



1

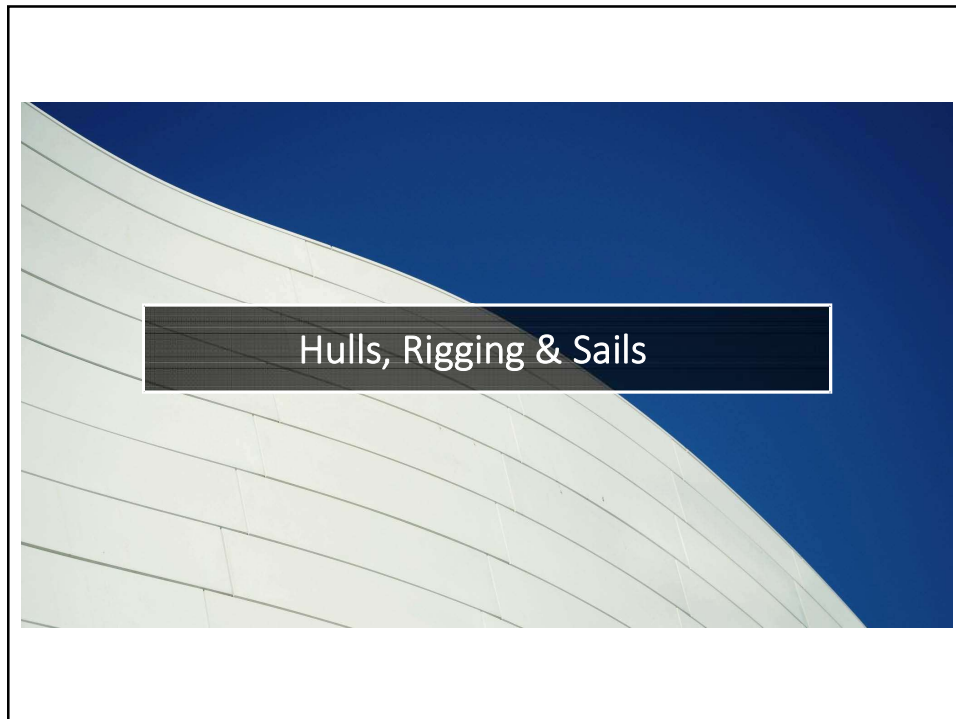


2

## Today's Agenda

- 1. Hulls, Rigging & Sails**
  - Different Boat Types
  - How the Wind Makes the Boat Go
  - Tacking & Jibing
- 2. Activities for a Day Sail**
  - Vessel Preparation and Setup
  - Crew Roles and Responsibilities
  - Vessel Takedown After the Sail
- 3. Knot Lesson – Bowline**

3



4

## **Topics We Will Reinforce:**

- **Common Hull Configurations**
- **Common Sailboat Configurations/Rig Types**
- **Types of Rigging**
- **How the Wind Makes the Boat Go**

5

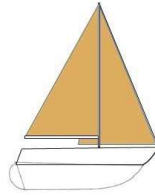
## **Topics We Will Reinforce:**

- **Points of Sail**
- **Sail Trim**

6

# Sloop Hull Configurations

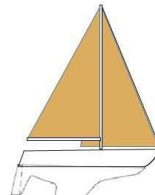
Types of fixed keels



**Full**  
Least heel  
Slowest  
Most comfortable



**Modified Full**  
Great heel reduction  
Slow  
Very comfortable



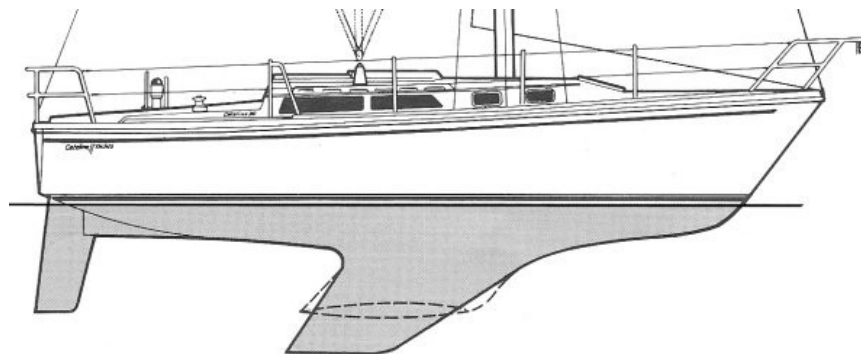
**Fin with skeg rudder**  
Faster  
Windward performance  
Protected rudder



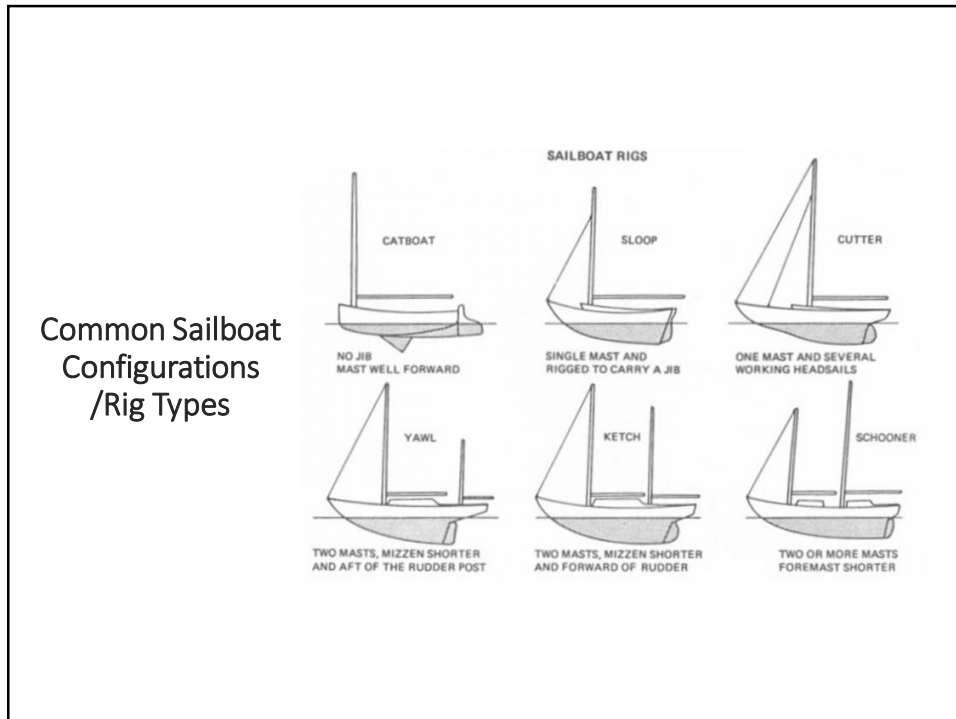
**Fin with spade rudder**  
Fastest  
Windward performance  
Vulnerable

7

# Catalina 30 Hull (Hiatus)



8



9



10



## Some of Our Neighbors:

### Ketch

A two masted sailboat. The smaller (mizzen) mast is in front of the rudder post.

11



## Some of Our Neighbors:

### Schooner

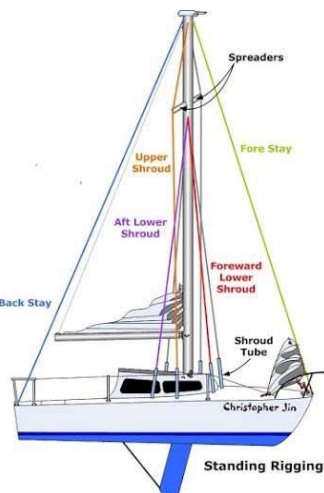
A sailboat with two or more masts, with the tallest usually in back.

12

## Types of Rigging

- Standing:  
Supports the Mast
- Running:  
Hoists Sails and Controls  
Their Movement

13



## Standing Rigging

- What provides fore and aft support to the mast?

Forestay and Backstay

- What provides side support to the mast?

Shrouds (and spreaders)

14

## Types of Rigs

(Determined by the Forestay)

- Masthead
- Fractional



15

## Types of Rigs

Where is the forestay attached on a **Masthead** rig?

Top/head of mast  
(larger boats, cruisers)



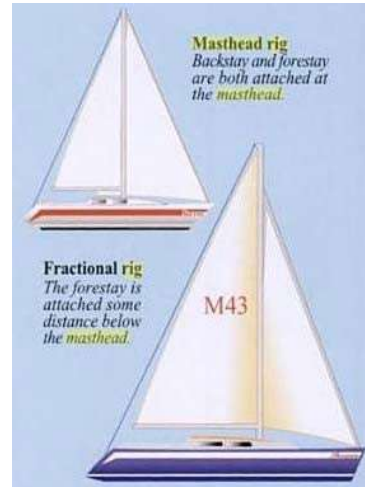
16



## Types of Rigs

Where is the forestay attached on a **Fractional** rig?

Partway up the mast.  
(smaller boats, racers – more control over mast bend)



17

## Fractional Rigs

Some of our neighbors



18

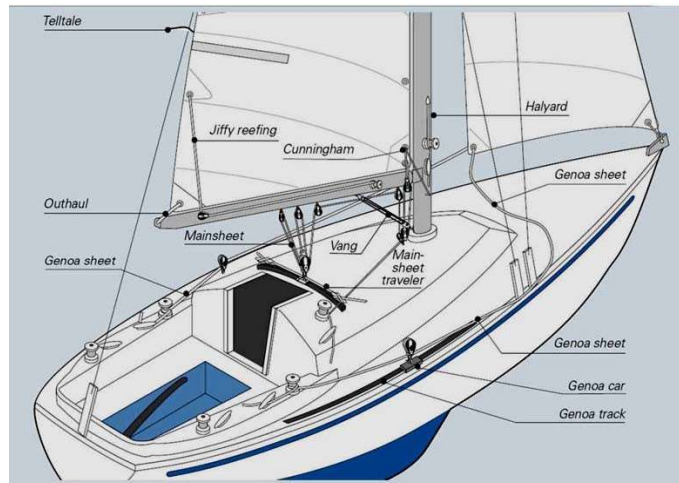
Is Hiatus a  
fractional or  
masthead rig?

masthead



19

## Running Rigging



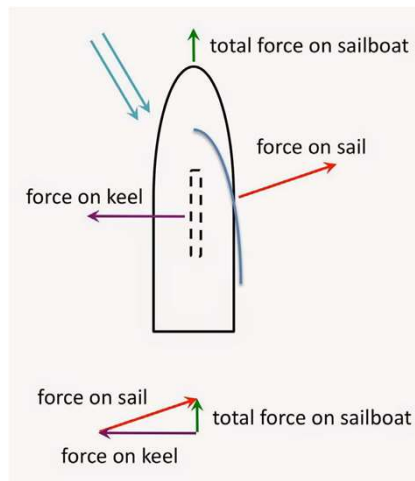
20

## How Wind Makes the Boat Go

- Fan demo
- Ice cube demo

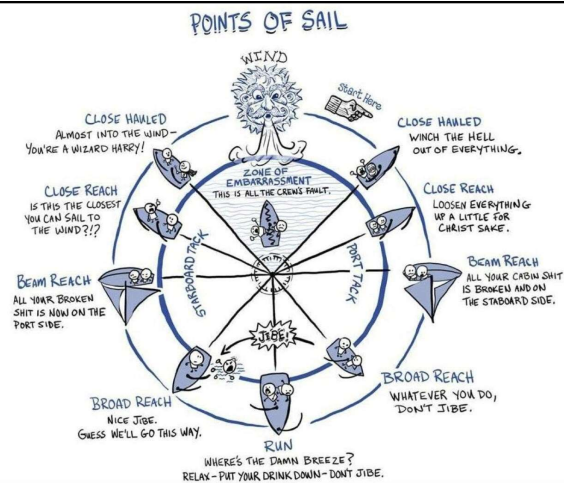
21

## How Wind Makes the Boat Go



22

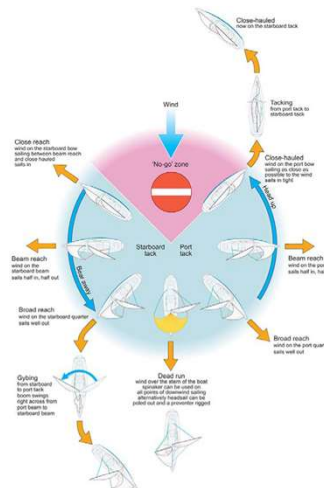
## “Colorful” Points of Sail



23

## Points of Sail

- **Beating/Close hauled:**  
sails in tight
- **Reaching:**  
Close reach: sails in  
Beam reach: sails ½ in, ½ out  
Broad reach: sails well out
- **Running:**  
• sails all the way out



24

## Sail Trim Basics

- Let out the sail until it luffs, and then sheet it in until it stops luffing (lift mode).
- If you let it out and it doesn't luff, you are sailing downwind (very broad reach or run). Set the sail perpendicular to the wind (push mode).

25

## Sail Trim Basics

- When in doubt, let it out.
  - An under-trimmed sail is obvious – it luffs.
  - An over-trimmed sail can look fine (unless you know how to use telltales).

26

## Sail Trim Basics – Telltales

### Genoa

- Adjust the genoa until both the inner and outer telltales are streaming straight back (this doesn't work downwind).

27

## Sail Trim Basics – Telltales

### Genoa

- If the genoa is too loose, the **inside** telltale will flutter. Trim in or fall off.
- If the genoa is too tight, the **outside** telltale will flutter. Ease or head up.

28

## Sail Trim Basics – Telltales

### Genoa

- Basically, you **move the sail toward** the fluttering telltale, or you **turn the boat away** from the fluttering telltale.

29

## Sail Trim Basics – Telltales

### Mainsail

- Adjust the mainsail until the telltales are streaming straight back.
- If they are wrapped to the leeward side of the sail, ease.
- If they are bending toward the windward side, sheet in (or travel up).

30

## Sail Trim Basics

- Check that the slot between the genoa and mainsail is open, so that air can move smoothly through.
- The genoa and mainsail should be working as a pair with their leeches parallel.

31

## Topics We Reinforced:

- Common Hull Configurations
- Common Sailboat Configurations/Rig Types
- Types of Rigging
- How the Wind Makes the Boat Go

32



## Topics We Reinforced:

- Points of Sail
- Sail Trim

33

# Fundamentals of Sailing

## Session 4: Getting Underway

Vessel preparation and setup  
Crew Roles and Responsibilities  
Squaring away after the sail

34



35

## First things first...

- \* Is this a good day...?
  - \* Weather
  - \* Physically and psychologically ready
  - \* Seasick
  - \* Clothing
  - \* Time

36

## Safety

- \* What do I need to know?
  - \* Should I wear a PFD? (yes)
  - \* Where's the First Aid Kit?
  - \* Lifelines
  - \* Is there a radio onboard? (And do I know how to use it?)

37

## Other Stuff...

- \* Is my gear stowed?
- \* Do I have sunscreen?
- \* Do I have water?
- \* How do I use the head?

38

## What is the Skipper and Crew doing?


- \* Weather
- \* Tides
- \* Wind Direction and speed
- \* Fuel Level
- \* Engine Hours
- \* Oil Level
- \* Coolant Level
- \* Bilge
- \* Switch Battery to On
- \* Radio on below and in cockpit
- \* Horn
- \* Navigation instruments on

39

## What is the Skipper and Crew doing?


- \* Removing covers
  - \* Sail
  - \* Winches
- \* Readying sheets and Halyards
  - \* Huh?

40



- \* Halyard...
  - \* Raises and lowers sails
    - \* Main Halyard
    - \* Jib Halyard (but Hiatus has roller furling)
- \* Sheet
  - \* Controls the sail
    - \* Main Sheet
    - \* Jib Sheet

41



## What is the Skipper and Crew doing?

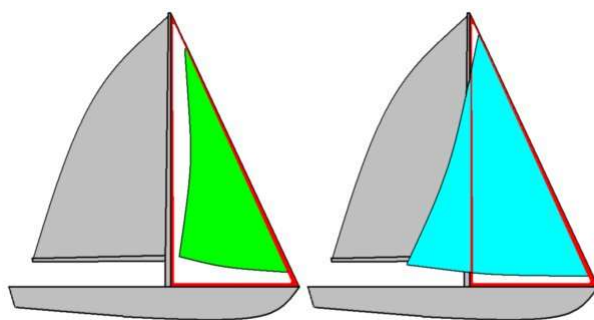
- \* Putting out winch handles
- \* Securing the lifeline
  - \* A word about Lifelines...
  - \* “One hand for you and one hand for the ship”
    - \* *The old sailor chastised us for forgetting to hold onto something during the rough weather. "One hand for yourself and one for the ship," he bellowed. This company expects you to work hard, but not so hard that you hurt yourself. One hand for yourself and one for the ship.*

42

## What is the Skipper and Crew doing?

- \* Getting the Jib ready
  - \* Or is it a Genoa?

43



Jib

Genoa

44

## What is the Skipper and Crew doing?

- \* Engine Controls
  - \* Hiatus has two...
    - \* Port – Transmission
      - \* Forward
      - \* Neutral
      - \* Reverse
    - \* Throttle
      - \* Further push forward, faster engine revs
  - \* Some boats have only one control

45

## What is the Skipper and Crew doing?

- \* Safety briefing is done
- \* Stuff is stowed
- \* Halyards, sheets and furling line are ready
- \* Let's Go Already!!
- \* Ooops! We're still tied to the dock...

46

## Casting Off the Lines

- \* Multiple lines on cleats
  - \* Bow lines
  - \* Stern lines
  - \* Spring line
- \* Don't forget the shore power!!!

47

## And now a word about dock lines and handling

- \* DO NOT ATTEMPT TO HOLD THE BOAT WITHOUT USING A CLEAT!!
- \* DO NOT PUT YOURSELF BETWEEN THE BOAT AND THE DOCK!!
- \* The Skipper will tell you which lines to let loose and in which order.

48



## What is the Skipper and Crew doing?


- \* The lines are cast off and we're underway! Yea!
- \* Before backing up, Skipper checks for traffic
- \* Use of 'Prop Walk' and 'Prop Wash'

49

## What is the Skipper and Crew doing?

- \* We're motoring out and put the boat into the wind to put up the Main Sail
  - \* One person at the Mast jumping the Halyard
  - \* One person on the winch taking up the slack
  - \* When the sail is nearly to the top, 'grind' it up the rest of the way with the winch
    - \* Winch...?

50



- \* Called a 'self-tailing' winch
- \* Sheet goes around clockwise
- \* Fit into the 'jaws'
- \* Many winches are at least two-speed

51

## On the Water - Crew Roles

- Main Sail**
  - \* Raise
  - \* Lower
- Jib/Genoa**
  - \* Deploy
  - \* Retract
- Tacking**
- Jibing**

52

## Raise the Main Sail

### Helm

- \* Bow into the wind

### Foredeck

- \* Jump (pull) halyard to raise main up the mast as far as possible

### Front Starboard Winch

- \* Place halyard on winch (2 wraps)
- \* Pull halyard slack as main rises
- \* Secure halyard in winch jaws when Jumper finishes
- \* Winch halyard to reach final height

53

## Deploy the Jib

### Helm

- \* Sail to a Close Reach

### Furler

- \* Remove furling line from cleat
- \* Maintain slight tension on furling line as jib is deployed
- \* Secure furling line to cleat

### Leeward Winch

- \* Place jib sheets on winch (2 wraps) and pull to deploy jib
- \* Secure jib sheet to winch and trim to point of sail

54

# Tacking

## Helm

- \* Maintain speed – “Prepare to Tack”
- \* When crew replies “Ready” reply “Helm’s a-Lee”
- \* Turn *quickly* through wind and stop turn after 90+ degrees

## Leeward (working) winch

- \* Remove jib sheet from jaws but continue to hold tight
- \* Quickly release jib sheet from winch when sail begins to Luff

## Windward (lazy) winch

- \* Pull jib sheet tight and place on winch (2 wraps)
- \* Once jib starts to luff pull sail across bow to new leeward side
- \* Secure jib sheet in winch and trim to new point of sail

55

# Jibing

## Helm

- \* “Prepare to Jibe”
- \* When crew replies “Ready” reply “Jibe - ho”
- \* Slowly turn stern through the wind to new broad reach

## Main Sheet Trimmer

- \* Center the boom and slowly release after stern is through wind
- \* This maneuver is essential to prevent accidental jibe

## Leeward and Windward Winches

- \* Sailing downwind load on jib will be significantly less than on tack
- \* As stern turns through the wind, release leeward and pull jib across bow to new broad reach position

56

We've had a great sail, now it's time  
to head back in...

57

What is the Skipper and Crew doing?

- \* We bring the boat into the wind and furl the jib
- \* Start the engine
  - \* Careful! Before we put it into gear, are there any lines in the water?
- \* Motor toward the harbor entrance and rig the 'lazy jacks'

58

## Furl the Jib

### Helm

- \* Bow into the wind

### Leeward Winch

- \* Once into wind release jib sheet but keep 1 wrap
- \* Maintain slight tension on jib sheet as sail is retracted

### Furler

- \* Remove furling line from cleat
- \* Pull line to retract the sail plus 2 wraps on forestay
- \* Secure furling line to cleat

59

## Lower the Main Sail

### Helm

- \* Bow into the wind

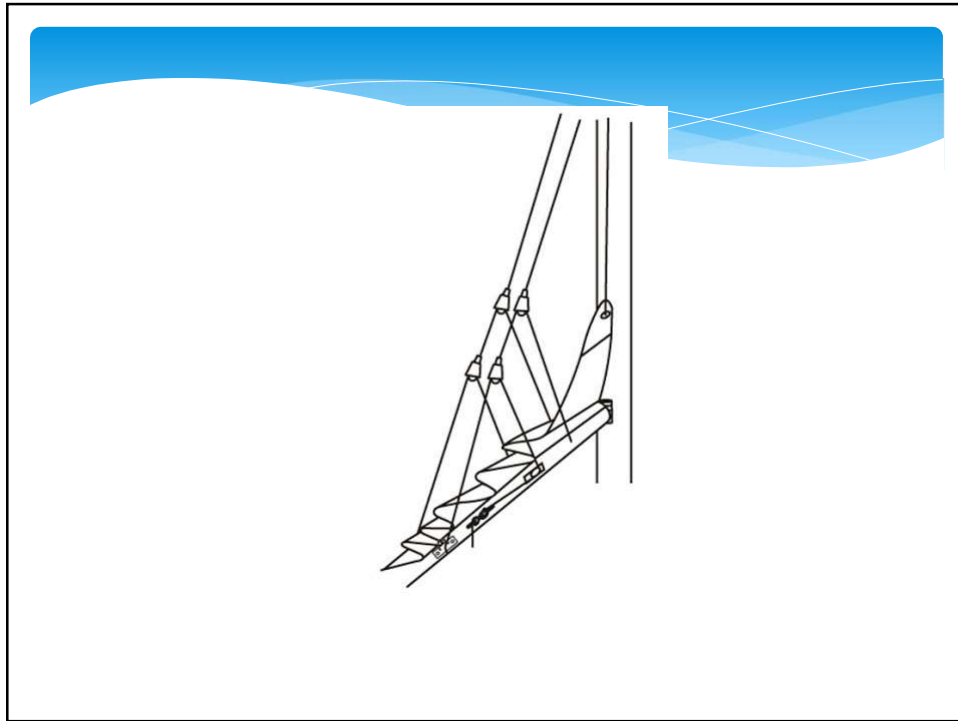
### Foredeck

- \* Deploy port and starboard lazy jacks
- \* Direct winch operator to gradually lower sail
- \* Evenly flake main over boom
- \* Secure main sail to boom with sail ties

### Front Starboard Winch

- \* Ensure boom is centered and tightly secured
- \* Secure halyard on winch and open clutch
- \* Gradually ease out halyard as directed by foredeck

60



61

## We're headed to the slip

- \* Check for:
  - \* Wind direction and speed
  - \* Tide – going in, out or 'slack'
  - \* Traffic
- \* Crew is designated to step off
- \* No need for fenders in Hiatus slip. Permanent part of dock

62

## Almost done for the day...

- \* Plug in shore power
- \* Coil sheets, halyards, furling line
- \* Turn off radios, store handheld and horn
- \* Winch covers, mainsail cover, port covers
- \* Cushions down below
- \* Turn off navigation instruments
- \* Switch battery to Off

63

A great day on the water!

(We came back with the same number of people we left with!)

64



Congratulations!  
You're well on your way to becoming an "Old Salt"

Photo # NH 63037 "Old Salts" on board USS Hartford, Winter of 1876-77



65

# Knot Lesson

Bowline

66

## Bowline



<https://youtu.be/V9EsQ4G-VaY>

67

## Dockside Sessions 3/14&15

- \* Two Sessions each day
  - \* Session 1 9:00 – 10:15      Arrive by 8:50
  - \* Session 2 10:30 – 11:45      Arrive by 10:20
- \* Meet outside F Dock Gate (Anybody need a map?)
- \* Skippers
  - \* 3/14 Darrel Vorderstrasse
  - \* 4/13 Jeff Sadler
- \* Agenda – Sailing Activities on Hiatus
  - \* Practice each of these activities at dockside

68

## On-The Water Sessions 3/18,25 & 4/1

- \* Your Skippers Will Be
  - \* 3/18 Jack Dunnigan
  - \* 3/25 Pat Rojek
  - \* 4/1 Darrel Vorderstrasse
- \* You Will Practice What You Have Learned
  - \* Setup For Sail
  - \* Points of Sail and Sail Trim
  - \* Tacking & Jibing
  - \* Return From Sail

69

## Homework for Next Week

- \* Chapter 4 Pages 59 - 63
  - \* Sailing Skills & Seamanship
- \* Chapter 6 Pages 91 - 95
  - \* Safe Sailing & the Law

70