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ASA 118a

Docking, Maneuvering, Outboard Motor Operation and Troubleshooting
(blue links go to videos and help files - CLICK THEM!)

Listed below are the key chapters from “Maneuver and Dock Your Sailboat Under Power”.

Ch.1 Momentum

Ch.2 Maneuvering in Forward

Ch.4 Reverse - How the Wind Effects the Boat

Ch.7 Leaving the Dock

Ch.8 Returning to the Dock

This course is designed to give you advanced tactics in docking and to help develop your sailor brain when encountering different situations and weather elements.

CURRICULUM

Outboard Review - [Prep and Starting](#) - [4 Oh No Moments](#)

External Parts of the Outboard

Internal Parts and How the Gear Shift Engages in the Lower Unit

- Lower Unit mechanics is why we always turn to idle speed when shifting and why we stop in neutral when an engine has forward and reverse.

Prep - Fuel, vent valve to gas cap, fuel line lever, kill switch. (Yups, these are the **4 Oh No Moments**)

- Choke - what it does, when to use, when not to use, be gentle with the pull.

- Double check for any lines or debris in the water.

- Starting The Engine - Body position, clearance behind pulling arm, friction point on flywheel, pull through friction point, listen to the idle, push choke back in, check discharge, clear with paper clip if needed, check gears by putting in forward and back to neutral (engage reverse on J80 or other boats with reverse).

[Before Leaving the Dock](#) (Side Tied Home Dock)

Situational Awareness is the foundation to averting issues anytime we are leaving a dock, returning to a marina, and while docking.

- Read wind direction and strength and assess how will it affect the boat

- Look at flags, boat wind indicators, and the surface of the water close to the boat and all the way down the fairway.
- Is there any activity in the fairway or other fairways?
- Do I have empty slips should I need to bail out?
- Wind direction. Can I use the jib if the engine fails?
- Should the boat be spun around?

Spinning the Boat

If the boat is not currently docked head to wind, when it is pushed off the dock, the wind will be pushing it back towards you and towards potential danger areas. To correct this and get assistance from the wind, we can spin the boat around.

We do this by pushing the stern out. When the stern goes out the wind will push against it. Guide the bow of the boat by the forestay. As the boat is coming around, have a crew member, who should still be on the boat during this, flip the fenders to the other side in preparation for the boat now being at the dock on the opposite side. Then, flip the dock lines to the other side of the boat and tie the boat off until you are ready to leave.

Leaving the Home Dock from a Side Tie

While this type of departure should have already been taught in BK1 and BK2, a solid review of technique is always a good thing.

- Boat head to wind
- Stern line secured to stern rail
- Backstay is tight
- Bow line secured to stanchion across from companion way with a clove hitch and excess in companion way
- Outboard is running in neutral
- Crew member at the tiller
- Rest of crew onboard
- Present bow to the wind.
- Slide hands down the lifelines continuing to guide the toward the center of the fairway
- Work your way to the stern rail. From here we can continue to guide the boats bow by pulling the stern rail toward you. Watch the stern so the outboard does not hit the dock.
- Once the backstay can be grabbed, grab it with one hand while the other hand stays on the stern rail and place one foot on the stern. Push steady and straight from the foot on the dock.
- Step aboard with the back foot and then put the outboard into forward at idle speed.
- Gage outboard speed based on conditions i.e., wind and current.

Boat Control and More Situational Awareness

Many of the aspects we cover will coincide with chapters 1 and 2 from the book.

Awareness

- Check wind direction and strength. Should OB fail, can we raise the jib to sail into a slip?
- Look for open slips
- Any movement from other boats in your fairway
- Boat movement from other fairways
- Debris in the water

Boat Control

- Effects of wind and current on how the boat tracks at idle speed. Are you drifting?
- Communication between helmsman and OB operator. Speed control.
- How to present the rudder to each side to slow down, even in idle speed
- Go to neutral to gage the glide of the boat
- Understanding the pivot point of the boat. Make a course change in the fairway by bring the pivot point over to the new line you want then turn the bow to be on that new line. Boats don't have front wheel drive.
- Turning the boat with rudder alignment. Before reaching the end of the fairway, imagine a line in the water bending toward the direction you want to go. Make a rudder adjustment that will copy that line and let the boat do the work.

The main fairway is a great place to practice turning the boat and emphasizing the pivot point.

- Turning - gaging swing room, stern swing, bow speed and allowing for bow inertia while correcting the tiller at the end of the turn. EFFECTS OF WIND AND CURRENT. Especially on the bow.
- Outboard assist on a turn. Swinging the outboard out will increase the speed of the turn without increasing the forward speed of the boat. Show how to use burst of the OB without increasing overall speed.
- Throttle to idle speed when turning to avoid cavitation.
- Show rudder drag again to slow the boat down.
- How to use reverse. Dragging reverse. Be aware of tank type. Beware of wrapping the kill switch around the motor

Docking

RULE 1. Head to WIND or CURRENT, whichever is strongest. Avoid being accelerated from the stern

RULE 2. Slow is Pro! It is much easier to add a pop of forward if you come up short than it is to try and find a break!

RULE 3. Do a drive-by in order to take in all factors and determine which side of the boat to dock.

RULE 4. Prep lines and crew early!

RULE 5. Have a bailout plan!

- Drive by. Wind, current, and any other boat traffic. Check surface of the water, wind indicators on other boats, and flags along the fairway.
- After drive-by, determine port or starboard to docking, and identify a cleat or target on the dock.
- Prep crew, fenders, and lines if not a touch and go.
- Find your 45-degree angle to the dock
- Speed control! Idle speed. Wind and current factors. Neutral as early as possible. Be prepared for a quick shift into forward if going too slow.
- Feather beam to dock for easy step off
- Secure boat by holding lifelines
- Pushing off correctly. Make sure stern is clear, direct boat from the shrouds, and have a clear target for the bow. Communicate well. Don't engage OB until person pushing off is onboard.
- Wind and current can affect the push off.

Springing Off the Dock

How we spring out is going to be determined by the set-up of the boat. A21's will have either an OB with an internal tank or an external tank.

STERN OUT

- Fender placement at the bow
- Crew member at the bow with a doubled back line
- How to get the line off the cleat from the bow
- Stern line in the turn/secure set-up with a crew member (this is just for practicing)
- Engage forward and drive on to the fender, swinging the stern out
- Explain speed and angle
- Cover how the bow line would then be released, OB into reverse to back out
- 2 options here. 1. Turn OB to reverse and back down towards the dock to return to starting position. Make sure stern line is being brought back in. 2. Have stern line person pull the boat back in. Option 1 can provide the opportunity to show how docking can be done when the wind is blowing the boat off the dock.

BOW OUT

- Fender placement at the stern. Fender at midship.
- Crew member with doubled back line at the stern

- How to get the line off the cleat
- Bow line in the turn/secure set-up with a crew member (this is just for practicing)
- Engage OB in reverse and drive on to the fender, swinging the bow out
- Explain speed and angle
- Bow brought back in by line person

WIND BLOWING OFF THE DOCK

- Fender placement at the bow
- Bringing boat bow into the wind just slightly off enough to provide an angle without losing the bow to the wind. Be prepared to bail if wind has caught the bow.
- Crew member with the bow line, split coil ready to toss
- Speed control between forward and reverse to keep the bow from hitting
- Bow line tossed. Bring in gradually for right distance. Signal to OB to begin backing down in reverse.
- Crew member ready at shrouds with stern line ready to step off. Be sure line is clear and through the stern rail.
- Steady boat along dock. Allow bow guy to get off and tie off.
- Stern guy tie off

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