

## **Docking and Maneuvering Standard (ASA 118)**

**PREREQUISITES:** Experience handling sailboats under power. ASA 103 recommended.

**DESCRIPTION:** The successful sailor will have the knowledge and skills to safely and competently dock and maneuver a sailboat under auxiliary power (inboard and outboard engines) in a variety of conditions. Includes knowledge of steering and propulsion theory, wind and current, single and double-rudder monohulls, catamarans, safety precautions, knots and line handling, fixed and floating docks. This endorsement may be obtained on a monohull or a catamaran.

### **KNOWLEDGE**

1. Describe the characteristics that affect a boat when docking or maneuvering, including hull and keel shape, prop hand, prop shaft angle, pivot point, rudder(s), and windage.
2. Explain the relevance of a boat's pivot point when moving forward or astern.
3. Describe the helm controls available for propulsion and steerage.
4. Explain prop wash, prop blast, and prop walk and their effects on maneuvering a boat.
5. Define rudder authority and how it is obtained.
6. Compare maneuvering differences between single-rudder and twin-rudder monohulls.
7. List the precautions for maneuvering in Reverse gear.
8. Explain how a bow thruster is used to maneuver a boat.
9. Explain how wind and current affect a boat while docking.
10. Describe the purpose, selection, and use of docking accessories including fenders, boat hooks, and dock lines.
11. List the common knots used for docking and their applications.
12. Explain why and how to double a line, take a turn, and surge a line.
13. Describe how to properly secure dock lines and fenders when moored alongside or in a slip.
14. Compare the implications of fixed vs floating docks when securing a boat.
15. Describe transits (ranges) and how they are used when docking.
16. Explain how to use the "ferry glide" technique in current.
17. Describe the use of spring lines during maneuvering and docking.
18. State the safety considerations during docking.
19. Describe crewmember duties during docking and undocking procedures.
20. Describe the Mediterranean Mooring process and compare different methods for securing the bow.
21. Compare maneuvering features between a twin-screw catamaran and a monohull, including pivot point, visibility, differential gear and power, and use of rudders.
22. Explain the process for docking a sailboat with a failed engine.

## SKILLS

23. Prepare a docking/undocking plan to include the following factors:

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- Assessment of boat configuration and condition
- Identification of equipment, including boat hooks, fenders, and lines
- Dock and fairway configuration
- Routes of exit and entry
- Water depth
- Wind and current direction and strength
- Potential hazards
- Crew assignments and instruction
- Emergency abort options and procedures

24. Make a controlled stop alongside an object.

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25. Drive forward, stop, and back up, under control and in a straight line.

26. Maneuver the boat in a confined space, including performing a 'standing turn' maneuver, turning the vessel 360 degrees using rudder position and gearshift/throttle control while remaining in a circle not exceeding two boat lengths in diameter.

27. In Reverse gear, back up and stop at a dock or mooring buoy.

28. Round objects in a figure-eight course in Forward gear and in Reverse gear.

29. Dock alongside (a parallel dock) using wind and prop walk to advantage.

30. Dock alongside with wind blowing the boat onto the dock.

31. Undock from an alongside slip with the wind blowing the boat onto the dock; use spring lines to spring out the stern or the bow.

32. Dock alongside with wind blowing the boat away from the dock, using an aft-led spring line.

33. Undock from an alongside slip with the wind blowing the boat away from the dock, using spring lines as needed to avoid other boats berthed fore or aft.

34. Dock bow first or stern first into a slip, as appropriate for conditions. Demonstrate proper use of spring lines and attachment of dock lines and fenders to secure the boat in the slip. Depart from the slip.

35. Perform or simulate a Mediterranean mooring using an anchor, mooring buoy, or lazy lines.

36. Coil and heave a dock line.

37. Construct each of the following knots without assistance:

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- Round turn and 2 half hitches
- Cleat hitch
- Bowline
- Clove hitch
- Cow horn hitch