

Spring Lines: The Secret Revealed

By Greg Jones

You don't need a bowthruster or Olympic weightlifters tugging on your dock lines to gracefully bring your boat alongside the dock, or leave it, for that matter. Winds blowing you onto the dock or contrary currents can be overcome as well; it's all possible when you master the use of spring lines. It comes down to balancing opposing forces, using the engine to pivot the boat around a line fixed between the dock and the boat.

Spring lines are best known for reducing the fore-and-aft motion of a docked boat, but spring lines can also produce leverage to swing the boat into or away from the dock. Using the force of the propeller against the resistance of the spring line, you can swing the bow or stern against the force of wind or tide, once you grasp the few principles involved.

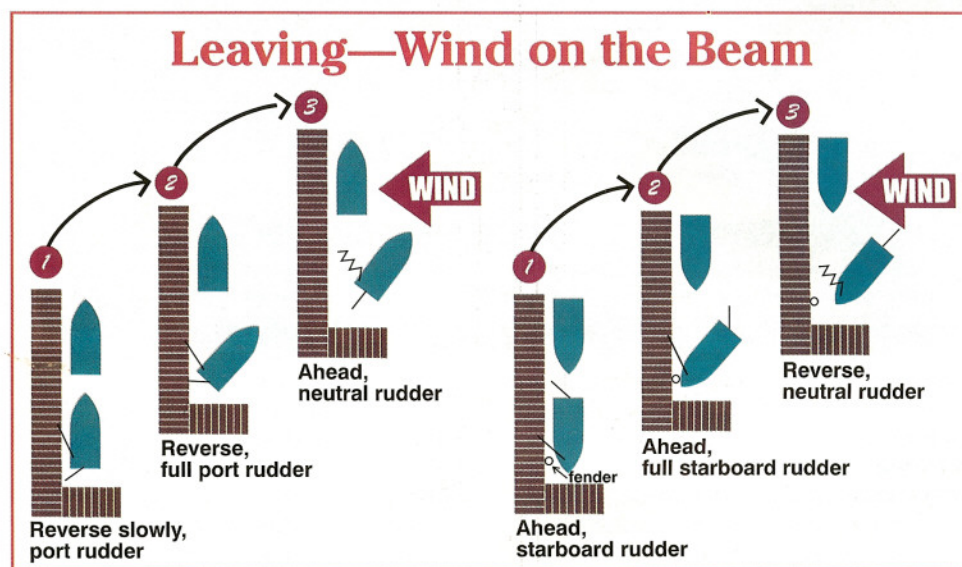
A Few Key Principles to Keep Docking Drama to a Minimum

- *Your spring lines should be at least as long as the boat, and a few feet more won't hurt.* They should be made of nylon, which will stretch under tension to reduce shock loads, and be large enough to grasp easily.
- *When you apply throttle, do it gently.* Wait until the spring line is taut before you apply enough throttle to begin the maneuver. Of course your boat's cleats should be properly sized and securely attached. At a minimum you need four cleats, one on each side of the bow and stern. A midships cleat can be very useful and, if your boat lacks them, installing a pair (backed properly) is a simple upgrade.
- *Think of the boat's cleat that holds the spring line as the pivot point for your maneuvers.* The force of the propeller pushes against that pivot point and the boat rotates around it.
- *Whenever possible, execute your docking maneuvers with the bow near the wind.* Wind astern adds a layer of complexity, but with your skill using spring lines, it's still possible. With more wind, you will need more throttle.
- *When you're coming alongside the dock, remember that legs, arms and bodies are terrible fenders.*

Even a small runabout can inflict injuries if a body part comes between the boat and the dock. The wake of a passing boat can suddenly push you into the dock even after you're tied up. Fenders are the only thing that should come between a boat and the dock. As for getting lines to the dock, heroic leaps, dock line in hand, are a recipe for, at best, comic relief, with a real possibility for serious injury. Learn to accurately heave a dock line and practice so that it becomes second nature. Not only will the dock crew appreciate your talent, it will smooth your docking procedure in the critical final moments before you tie up.

and the dock. He will also be in charge of casting off the dock lines in the stern, at your command.

Start the engine and put the transmission into reverse. As you do this, the bow crew slacks the bow line and then retrieves it aboard. When the boat is tight against the forward spring line (the one running from the stern diagonally forward), the bow crew takes in the aft spring line and the aft crew retrieves the stern line. The aft crew then takes the fender and places it between the boat and the dock, holding on to the fender's line. Now, the only line holding the boat to the dock is the for-



Let's go through, step by step, getting your boat out from a dock where you are tied up with the dock to port and a boat directly forward of you. The situation is complicated by a breeze that is pushing you forward and onto the dock, piping up from the starboard-side stern quarter. You need to swing the bow out while keeping clear of the boat in front. Begin by thoroughly briefing your crew on the maneuver. Place one crewmember on the bow where he will be in charge of casting off the forward dock lines, both the bow line and the aft spring line. In the stern, place another crewmember with a fender ready to be deployed between the stern

ward spring line. With the rudder turned as though to back down to port (the tiller pushed to starboard or the wheel rotated counter-clockwise), the boat will want to reverse to port, but the spring line will pull the stern into the dock.

With *gentle* power astern, the bow will slowly pivot out, away from the dock, and the stern crew's job is to keep the fender deployed properly. When the bow has fully cleared the boat ahead, steer to make a starboard turn and shift into forward gear as the stern crew retrieves the forward spring line.

If it's the stern of your boat you need to

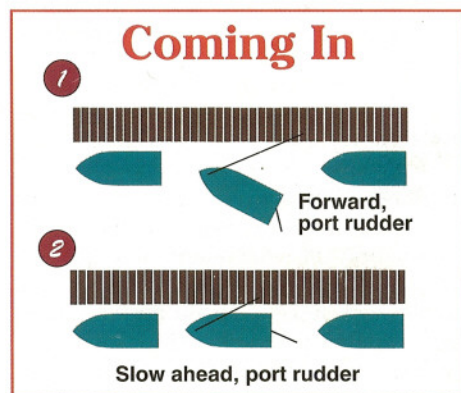
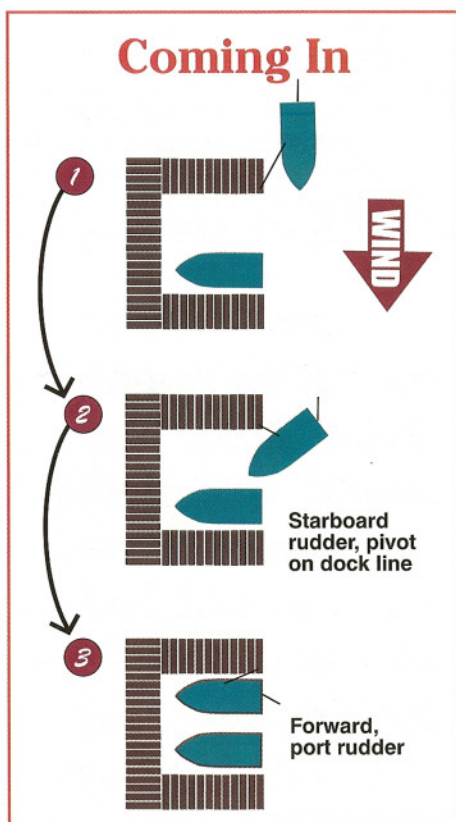
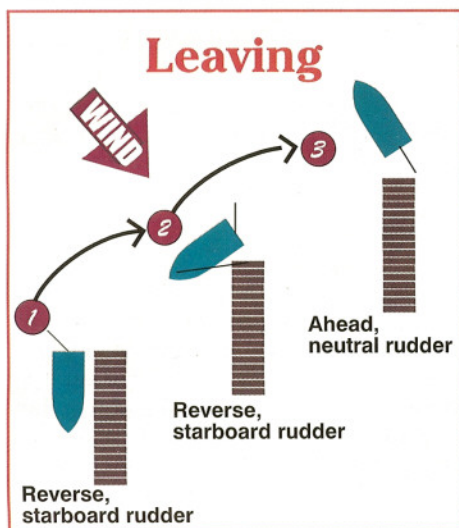
move out first, the technique is the same but now you pivot on the aft spring line. The crew on the bow takes care of the bow line, releasing it first and manning the fender. The stern crew retrieves the stern line and the forward spring line when the boat comes up against the tension of the aft spring line. Turn the wheel or tiller as though to turn into the dock and power gently forward. The aft spring line will hold the bow against the dock and the stern, with nowhere else to go, will swing out away from the dock. When the stern is sufficiently clear of any obstacles aft, retrieve the aft spring line, engage reverse and continue astern until you are clear.

retrieve the forward spring line and slowly let out the aft line while keeping enough tension on it to hold in the stern.

You could continue to use the forward spring line if it will be long enough; by the end of this maneuver, the stern of your boat will be well clear of the end of the dock. With a wrap on the boat's stern cleat, the crew can easily control the line. When the stern has cleared the end of the slip, steer as though to turn to port and the boat will pivot to port with the bow swinging around to starboard. The stern line needs to be let out enough so the stern will not whack the end of the slip as it pivots. Once the boat is fully clear, retrieve the stern line and go forward.

someone on the dock to loop it over the cleat at the end of the dock. Your crew will take in the line and the running end will be looped around the cleat to allow your crew to take it in or release as needed.

When the cleat on your boat is near the dock cleat, the crew takes tension on the spring line and you turn to starboard and gently apply some throttle. As the bow swings around and points into the dock, your crew slowly lets out the spring line. With another crewmember on roving fender duty to keep the boat off the dock, the boat will slowly go forward and swing into the dock.



You can also use a spring line to pivot around the end of a dock. Again you are using opposing forces to induce the stern or the bow to pivot around a fixed point, the spring line cleat. You're tied up at your slip, bow in with the dock to port, and the wind is pushing you onto the dock. You could brute-force your way out, backing down and rolling the fenders along the dock and hoping for the best, but there is a better way.

This time, depending on the length of your lines, you may need to use your stern dock line and your forward spring line together. With the transmission in reverse, your bow crew retrieves the bow line and the aft spring line as you back down, steering as though to turn to starboard, away from the dock. Your bow crew can make themselves useful after retrieving their lines by going aft and manning a fender, since your stern crew is going to be letting out the forward spring line. When the end of the slip comes alongside the stern line cleat,

Spring lines are useful for docking as well. Consider this scenario: You have entered the row of slips and need to make your turn to enter the slip and tie up on the starboard side. The wind is pushing you down the row of slips and will blow you away from the dock once you're alongside. Your slip neighbor's new trawler is tied up on the opposite dock and if you're not careful, the wind could induce some embarrassing paint-swapping if you drift downwind.

Rig a forward spring line from a midships cleat on your boat's starboard side and ask

To fit into a tight space at the fuel dock, have a spring line rigged to the bow on the side nearest the dock. Bring your boat in with the bow at a 45-degree angle to the dock and pass a line ashore when you get close to the dock. With the line secured to the dock (or looped over the dock cleat and controlled by your crew), apply gentle throttle and come up against the line. To help swing the stern to the dock, steer as though to turn away from it. That will swing the stern into the dock. As your crew slowly lets out the spring line, your boat will come up against the dock where you can finish tying up.

The key to mastering the use of spring lines is practice. Airplane pilots spend a lot of time practicing what is called "touch and go" landing: At the moment the wheels touch the runway, they apply throttle and take off again. You can do the same thing at a quiet dock. As soon as you've successfully come alongside the dock, head back out. Refresh your skills for an afternoon early in the spring and you'll be ready for another successful boating season. And remember that, despite your best efforts, maneuvering a boat in tight quarters always leaves open the possibility of drama. Practice! 🚤