

Navy 44 Back and Fill Procedure

Objective:

Complete a 360-degree turn in a stationary geographic position.

Background:

This procedure is used to turn or pivot the boat in a tight space. The situation is usually encountered in a crowded harbor or anchorage. It is practiced to gain experience of wind and current effects on the boat while using the throttle to create the turning force.

Explanation:

Commence the exercise in a location with good visual references and the transmission in neutral not making way. Turn the wheel to full right rudder (normally to the right when you have a right handed prop because of the tendency of the stern to prop-walk to port when in reverse thereby assisting the turn). When the transmission is in forward, the prop wash, forcing hard upon the starboard-extended rudder, will turn the bow to starboard. When the transmission is in reverse, the stern will be forced to port and the bow will continue to starboard because of the location of the pivot point. By alternating forward and reverse, power the boat through a 360-degree turn while maintaining your start position. In light winds you should be able to complete the maneuver without changing the rudder position. However, should the wind or current require you to gain sternway at some position in the turn, you may be required to reverse the rudder while backing. Figure 1 depicts the boat in various positions during the maneuver. While the pivot point should remain over a fixed point throughout the maneuver, Figure 1 shows the boat at different positions for clarity.

Engineering considerations:

When shifting transmission directions you must pause temporarily in the neutral position to permit the engine RPM to decrease to idle. This is required to reduce wear and tear on the transmission damper plates.

Safety considerations:

- (1) Ensure there is plenty of clearance and other boats or objects will not cause safety concerns during the operation.
- (2) Ensure the current and wind will not force the boat into any obstructions or into the path of any other vessels.
- (3) If the quarters are especially tight or if there is risk of contacting objects, assign one or more fender tenders.

General Situation:

Assume the boat is stopped and not making way.

Required Positions:

- (1) Helmsman
- (2) Lookout
- (3) Fender tenders (as required)

Sequence of Events:

- (1) Helmsman assigns fender tenders as the situation warrants and designates the lookout.
- (2) Lookout moves to the bow, clears the area for the maneuver and reports "Ready" to the Helmsman.
- (3) Assigned fender tenders take fenders in hand and report "Ready" to the Helmsman.
- (4) After receiving "Ready" from the crew, Helmsman announces "commencing turn."
- (5) Helmsman turns the wheel hard to the right and holds it in this position during the entire maneuver.
- (6) The Helmsman repeats successive forward and reverse movements of the throttle, each time allowing the boat to rotate clockwise slightly but without any significant forward or rearward motion of the boat. Passing between forward and reverse, the Helmsman pauses in neutral long enough to allow the engine RPM to decrease to idle.
- (7) When the boat completes the 360-degree turn, the Helmsman centers the wheel as required, returns the transmission to neutral and idle RPM, and notes the position.

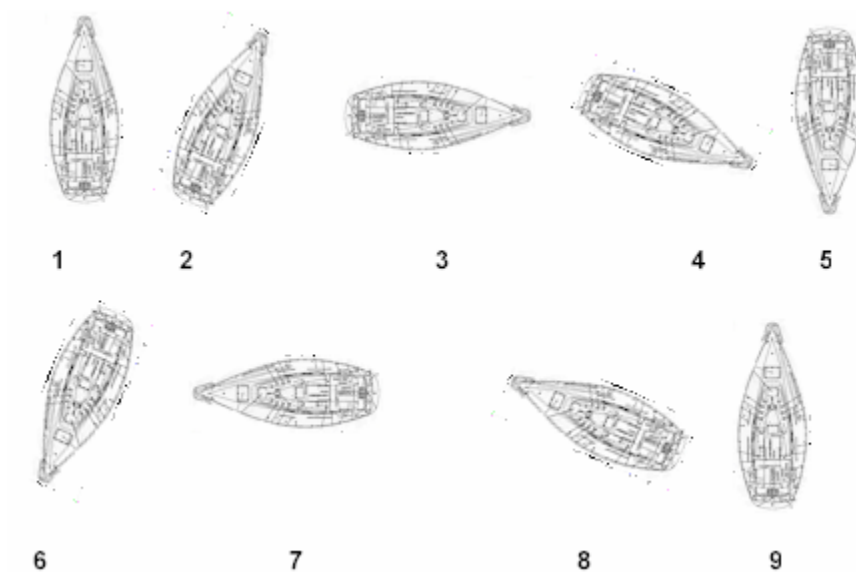


Figure 1