

CHAPTER 6

SPECIAL OPERATIONS

6-1. INTRODUCTION.

The Navy 44 is well-suited for night operations, heavy weather, restricted visibility, and offshore passages. However, the time to investigate its sailing characteristics in these operating conditions is BEFORE they are encountered for the first time.

6-2. NIGHT OPERATIONS.

Prior to night operations, the crew should familiarize themselves with the light switches on the ELECTRICAL SWITCHBOARD PANEL, the physical location of the actual light units for RUNNING LIGHTS (lo), RUNNING LIGHTS (hi), cabin lights, deck lights, spot light plug-ins, and flashlight stowage locations.

Locate the NAV light switches.

See Figure 1-32, Switchboard Panel.

Essential switches are:

NAV LIGHTS - Top of left column.

MASTHEAD LIGHT - Below NAV LIGHTS.

DECK LIGHTS - Bottom of left column.

ANCHOR BOW LT - Next to DECK LIGHTS.

NAV LTS HI-LO - Bottom of right column.

COMPASS LIGHT - NEXT TO NAV HI-LO

NOTE

COLREGS require either set for night or reduced visibility, but state that both may not be used at the same time.

1. NAV LIGHTS. There are two sets of navigation lights. The NAV LO set is the bi-color combination light located on the bow pulpit and the stern light located on the stern pulpit. The NAV HI set is the tri-color light located on top of the mast. Select NAV LO for near shore operations and while motoring. For higher visibility select NAV HI.

NOTE

The "MASTHEAD LIGHT" switch must be turned ON to energize the ANCHOR/BOW LIGHT, and DECK LIGHT.

2. The MASTHEAD LIGHT BOW LT is required by COLREGS to be shown with the NAV LTS when operating under engine. To energize, turn the switch marked MASTHEAD LIGHT on and turn the ANCHOR BOW LT switch to BOW LT.
3. The ANCHOR LIGHT is the lower of the two lights on the top of the mast. It is a white light visible through 360 degrees. To energize, turn the ANCHOR LIGHT to ON.
4. The DECK LIGHT is the lower of two lights housed in the same unit as the MASTHEAD LIGHT BOW LT. It illuminates the deck. To energize, turn the DECK LIGHT to ON.
5. The COMPASS LIGHT is mounted in the binnacle to illuminate the compass. To energize it, turn the NAV LIGHTS switch on and turn the COMPASS LIGHT on.

6-3. HEAVY WEATHER OPERATIONS.

Prudence is required for heavy weather operations. The urgency of the mission must be considered. If there is no urgency to conduct the sortie, prudence would dictate that the vessel remain in port. Once committed to the sea, the decision to seek the safe haven of a secure port must be weighed against the hazards of making a landfall in adverse weather. Once committed to the sea, employment of these procedures will help to ensure a safe passage to the crew as well as the boat.

6-3.1 STORM SAILS.

The Navy 44 is a sailboat and is designed to sail. The stability of the boat under sail, even in heavy weather is preferred to that of proceeding under engine alone. Prudence is required in making the decision to use storm sails..

Safety Considerations:

1. DO NOT rig the inner forestay without rigging running backstays.
2. There will be enormous forces acting on the rig during conditions when these sails will be rigged.
3. Ensure the tackline of the trysail is secured to prevent the sail from being hoisted off the luff track.
4. Safety harnesses will be required.
5. Once the mainsail is lowered, ensure positive control of the boom is maintained at all times.

General Situation:

Assume high winds and heavy seas.

6-3.1.1 BENDING ON THE STORM JIB.

Sequence of Events:

1. Rig the inner forestay.
2. Rig one large snatch block on the toerail just aft of the midships stanchion and one small snatch block between the primary and secondary winches. Rig to both sides of the boat.

CAUTION

The spinnaker topping lift, (T-Lift), is used as the halyard for the storm jib to provide the same hoisting angle as the inner forestay.

3. Hank on the storm jib to the inner forestay and attach the topping lift to the head of the jib. Attach jib sheets.
4. Lead the sheets outboard of the shrouds, through the large snatch block, and through the turning block to the primary winches. Tie a stopper knot in the tail of the sheet.
5. Rig the running backstays. Lead running backstay tails on the inside of the life lines, through the small snatch blocks, and then to the secondary winches.

6-3.1.2 HOISTING THE STORM JIB.

Prudence dictates that the crew should be wearing safety harnesses in these conditions.

1. Untie restraints used to hold the jib in place prior to hoisting..
2. Hoist the jib using the T-LIFT.
3. "Take" on the SHEET and SET to desired TRIM.

6-3.1.3 BENDING ON THE STORM TRYSAIL.

The storm trysail is used in winds of 35+ in lieu of the mainsail. Procedures include lowering the mainsail and lashing it to the boom.

1. Bring the storm trysail up on deck. Tie the bag down in the vicinity of the mast.
2. Attach the pendant of the tack of the sail to a reefing horn.

WARNING

CARE MUST BE TAKEN TO CONTROL THE SAIL AS IT IS BEING HANKED ON TO PREVENT THE WIND FROM BLOSSOMING THE SAIL.

3. Open the mast track keeper.
4. Start the luff of the sail into the storm trysail track on the port side of the mast.
5. This completes the bend on procedures to this point because...
 - The halyard cannot be attached to the head of the trysail until the mainsail is lowered.
 - The sheets attached to the storm trysail cannot be led to the spreader blocks in the quarter of the boat until the mainsail is lowered.

6-3.1.4 HOISTING THE STORM TRYSAIL.

1. Lower the mainsail, flaking it on the boom.
2. Lash the mainsail to the boom with four sail ties or more.
3. Tension the boom vang.

NOTE

The actions of steps 4 and 5 are intended to immobilize the boom in a position that presents the least obstruction.

4. Use the 4 part block and tackle from the aft bale on the boom to the toe rail, (downwind side is a consideration). Make the tackle "snug". This imparts a force vector down and to the rail of the boat.
5. Move the traveler to the same side, and tighten the mainsheet. This exerts a force vector down and toward midship, but also creates a monumental trip hazard.
6. Lead the attached sheets of the STORM TRYSAIL through the spreader blocks to the secondary winches.
7. Remove the halyard from the mainsail. Attach it to head of the trysail and hoist.
8. Trim BOTH sheets to centerline. This will make the STORM TRYSAIL "self tending" when the boat is tacked.

The boat will make way to weather with these sails set enabling the boat to work its way off of a lee shore.

6-4 RESTRICTED VISIBILITY.

The caveat advanced for heavy weather sailing applies to operations in reduced visibility. The following procedures must be followed in addition to those employed for sailing in "fair weather".

1. COLREGS require that navigation lights be displayed when visibility is restricted.
2. COLREGS require that fog signals be sounded when the visibility is reduced.
3. Night operations are considered reduced visibility for the purposes of navigation lights.
4. A forward lookout is prudent in the bow for advance warning of ship traffic and obstacles.
5. Prudence must be used to decide whether to operate under engine to generate electrical power for the RADAR or to operate under sail for better hearing of sound signals.
6. Precise navigation is required. Use as many nav aids as possible to ascertain a positive position, LORAN, GPS, RADAR, hand bearing compass, piloting techniques.

7. Place the VHF radio on scan to include Channel 9 VHF, and Channel 13, Bridge to Bridge, for emergency radio traffic.
8. Plug-in the spotlight and have it ready in the fog to train in the direction of suspected targets. The intensity of the spotlight will penetrate fog and illuminate obstructions when visibility from the naked eye is limited.

6-5 OPERATIONS OFFSHORE.

Long distance passage-making is well within the capability of the NAVY 44. Items that require special considerations are:

1. Safety harnesses must be worn, and the crew member "snapped in" to hard points on the deck of the boat, prior to exiting the cabin at night or at any other time as may be required during rough weather.
2. Jacklines are rigged from the bow along each side deck inside the shrouds to the aft quarter of the boat. Secure the tether of the harness to a jackline for access forward of the cockpit.
3. Buddy system procedures are encouraged to account for topside personnel.
4. Awareness of changing weather conditions is imperative for early sail changes. The time to change a sail or to reef...is the first time the thought occurs.

6-6 TOWING OPERATIONS.

There may come a time when you will need to tow another Navy 44 or to be towed. Determine whether the tow will be astern or alongside. Generally towing astern is more convenient in open ocean. Towing alongside is recommended within the shelter of a harbor when preparing to deliver the towed vessel to a dock. Deck hardware applicable to towing is:

1. Four open mooring chocks, two on the bow, port and stbd; and two at the transom, port and stbd with the corresponding mooring cleat.
2. Four closed rail chocks bolted on to the toe rail; two amidships, port and stbd; and two at the stern quarters, port and stbd with a corresponding mooring cleat.

3. Four 45-foot and one 75-foot length of 5/8-inch diameter, laid nylon line for docking/mooring lines.
See Figure 1-39.

6-6.1 TOWING ASTERN.

These procedures apply to you as the tow vessel.

WARNING

THE TOW BRIDLE MUST BE CLEAR OF ALL STERN COMPONENTS FROM THE CHOCK ON ONE QUARTER OF THE VESSEL TO THE CHOCK ON THE OPPOSITE SIDE.

1. Communicate with the OTHER vessel and determine who will provide the towing hawser. Remember that you know the condition of your hawser.
2. Rig a bridle that will be long enough. Attach a snatch block so the sheave will ride on the bridle.
3. Tie one end of the bridle to a stern cleat. Pass the bridle out through the skene chock on the transom. Allow enough slack to clear the stern components of your boat. Pass the bridle in through the skene chock on the other quarter. A loop can be tied into the end with a bowline to simplify engaging and disengaging the bridle.
4. Maneuver your vessel to pass close aboard.
5. If using the towed vessel's hawser, skip to USING THE TOWED VESSELS HAWSER. If using your own hawser continue with this procedure.

USING YOUR HAWSER.

6. Tie the hawser to the snap shackle of the snatch block while the sheave rolls on the bridle.
7. Route the bridle to the other chock and secure it to a mooring cleat.
8. Pass the hawser to the other boat.
9. Go to TAKING THE TOW.

USING THE TOWED VESSELS HAWSER.

10. Take the towed vessel's hawser.
11. Tie the hawser to the snap shackle of the

snatch block riding on the bridle. Use a bowline.

12. Route the bridle to the other chock and secure it to the cleat.

TAKING THE TOW.

13. Proceed forward slowly as the hawser is made ready.
14. After you receive a signal, (visual, audible or by VHF radio) that the hawser is ready, take tension on the hawser.
15. Establish a steady strain on the line.
16. Adjust speed through the water for sea conditions and compatibility of the tow line between the vessels.

6-6.2 BEING TOWED ASTERN.

1. Determine who will provide the hawser. Remember you know the condition of your hawser.
2. Ready the foredeck for the hawser. Clear a path from the bow chock to be used to the mast. The hawser will be tied to the mast, the most secure point on the boat, with a bowline.

USING YOUR OWN HAWSER.

3. Tie it to the mast, pass it through the intended chock, and make it ready to pass to the towing vessel when it passes alongside.
4. Pass it to the towing vessel.

USING THE OTHER VESSELS HAWSER.

5. When using the towing vessel's hawser, take it, work it to the bow, pass it through the bow pulpit, through the chock, and secure it to the mast with a bowline.
6. Before a strain develops on the line, place chaffing gear at the point where the line passes through the chock.
7. Tend the hawser and call out the amount of slack in the line.
8. As the line comes taut, call out the amount of strain.
9. Helm. Steer the boat to align the boat with the towing vessel and keep the boat in trail.

10. Use hand signals and/or VHF radio to communicate the desired boat speed. This is the responsibility of the vessel being towed.
11. Monitor the hawser for security and chafe.

6-6.3 TOWING ALONGSIDE.

NOTE

A likely scenario for this procedure is that of changing from towing astern in open ocean to towing alongside once the safety of a harbor has been achieved and in preparation for delivering the towed vessel to a dock.

1. Lines required are bow, stern, forward spring, and aft spring. Fenders are required.
2. Communicate with the towed vessel and determine who will provide the lines and who will provide fenders. It is recommended that the towing vessel provide lines and fenders. This leaves the towed boat with its lines and fenders available for dockage when released from the tow.

WARNING

USE FENDERS TO KEEP THE BOATS APART. DO NOT ALLOW HANDS OR FEET INTO THE AREA BETWEEN THE BOATS.

3. Fenders should be rigged on the side that will be between the boats.
4. Tow vessel reduces power and swings out of line and allows the towed vessel to creep up alongside. Tend the now "slack" towing hawser to keep it from fouling in the prop.
5. Establish a parallel course with the towed vessel.

CAUTION

Keep the towed vessel slightly aft of directly alongside to avoid the spreaders "locking horns" in the event the boats rock in close proximity.

6. Pass lines across to the towed vessel. Use power as necessary to maintain an

'alongside' position with the towed vessel that is slightly aft of directly amidship.

7. Slowly draw in the bow and aft spring line to make the boats converge. drawing lines in as the distance is reduced.
8. Towing vessel should arrive alongside close enough to pass lines, yet far enough to ensure a safe margin. Choppy water could swing masts together and "lock horns" with the spreaders.
9. Pass lines across from one vessel to the other.
10. Take a light strain on the bow line so that the boats will be drawn together as the tow vessel starts to make way.
11. Adjust the length of the bow line to ensure that the spreaders will not "Lock Horns."
12. Adjust spring lines and the stern line to keep the vessels snug.
13. Signal to the towing vessel when ready to be towed.
14. Helm should be amidships. Let the towing vessel maneuver both vessels.
15. For close maneuvering, be prepared to use the helm in response to any request from the towing vessel.
16. Communicate with the towing vessel as to speed compatibility with your vessel. This is the responsibility of the vessel being towed.
17. Ready lines and fenders for docking when appropriate.

6-6.4 BEING TOWED ALONGSIDE.

1. Use the same procedures as in 6-6.3. Use the towing vessel's lines and fenders to secure the two boats together. This will leave your lines available for docking when tow is cast off.
2. Steer your vessel to follow the tow vessel in trail.
3. Communicate with the tow vessel the desirability of the towing speed. This is your responsibility.
4. Ready your docking lines and fenders to the free side of your vessel in

preparation for being cast off and making a dock.

6-7. ANCHORING.

The Navy 44 rides comfortably at anchor. It responds more to wind direction than to current. The following rules of thumb for the scope to be used apply.

- Lunch Hook. Length of anchor rode = 3X (water depth at high tide plus height of bow above the water).
- Overnight - personnel onboard. Length of anchor rode = 5X (water depth at high tide plus height of bow above the water).
- Unattended - all personnel going ashore. Length of anchor rode = 7X (water depth at high tide plus height of bow above the water).

There are two (2) anchors on board the Navy 44.

- A 20-pound Hi-Tensile Danforth anchor is stowed under the radial drive aft of the engine compartment, with 6 feet of 3/8 inch chain and rode. It is secured in chocks with a retaining pin. This is the anchor most often used.
- A 35-pound Deepset Danforth anchor is stowed in the forward cabin, stbd side under a pipe berth, with 6 feet of 3/8 inch chain and rode. This is the heaviest and most secure anchor.

6-7.1 PREPARATION.

1. Prior to getting to the anchorage, the navigator determines the approximate depth of the water in the intended anchorage.
2. Bring the anchor to be used to the foredeck.
3. Unlash the anchor rode to be used and take it to the foredeck.
4. Ensure that the rode is attached to the anchor.
5. Ensure that the shackled is "Moused".
6. Make the bitter end of the rode fast to the boat (a bowline around the mast works).
7. Select the side of the foredeck opposite to that side used to bring the jib down.

8. Lay out the rode from the anchor on the deck to the shrouds and back in switchbacks until the desired length of rode is acquired (the "J" measurement, 18.5', can be used to estimate rode length).

6-7.2 AT THE ANCHORAGE.

1. Visualize where the boat will be in the anchorage. Estimate a distance to windward equal to the amount of anchor rode to be used. This is where the anchor should be dropped.
2. Approach the anchor drop zone into the wind under engine.
3. As the boat approaches the drop point, put the engine in neutral.
4. Feed the anchor and rode out through the pulpit on the same side as it has been cleated until the anchor is AT THE WATER.
5. When way has been lost:
 - Lower the anchor hand over hand until it touches bottom.. Dropping the anchor with no control may foul it on its own chain or rode.
 - Pay out rode and note how much it took to reach the bottom. Compare this to what the navigator predicted so as to determine the accuracy of the amount of scope being used.
 - Put the engine in reverse and start the boat backing. Take the boat out of gear so as not to back in a circle.
6. When the anchor rode comes up taut, put the engine in reverse and place a strain on it to dig it in.
7. Take a "round of LOP's" to fix position on the chart. LORAN and GPS position can also be used.

6-7.3 AT ANCHOR.

1. Navigator can set the anchor alarm on the Loran for a swing circle plus an acceptable wander distance.
2. Check the boat's position according to boat routine as established by the skipper. Set an anchor watch if advisable.

6-7.4 DEPARTING FROM THE ANCHORAGE.

The preferred method is to have two crew on the bow. One to take in on the rode as it comes slack. The other to "spot" the anchor and relay signals to the helm. Foredeck personnel should be prepared to deal with a sloppy anchor. Keep the anchor and rode to the side opposite where the jib is being readied to hoist.

1. Ensure that the engine is operating.
2. Place the engine in forward and work the boat up to the anchor following the signals of the spotter.
3. Uncleat the anchor rode and hold it at the ready with a turn on the cleat to provide holding friction.
4. Take in on the rode as it becomes slack.
5. As the rode is coming up to a "short stay", cleat the rode.
6. Take the boat out of gear and let the momentum of the boat ride over the anchor.
7. Feel the "slack" as the anchor is dislodged. Take in on the anchor rapidly to avoid it setting itself again. When off the bottom, report "Anchors Aweigh" to the helm.
8. Helm can put the boat in gear and with moderate speed leave the anchorage.
9. As the anchor is brought up report, "In Sight", and whether it is 'clear or foul'. Hold the anchor at the waterline.
10. Inspect the anchor for debris. If it has mud etc. clinging to the anchor, hold the anchor in the water and let the wave action "wash" the anchor.
11. When it is clean bring it up on deck. Report "anchor on deck".
12. Return anchor and rode to their stowed location.

End of Chapter 6.