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1. INTRODUCTION

Thank you for purchasing an Expo 14.2, built by Catalina Yachts. We welcome you to the fun and recreation of sailing and hope that you have many years of enjoyment from your Expo 14.2.

This manual will discuss techniques and characteristics specific to the Expo 14.2. A general Handbook also accompanies this manual and we ask that you read both of the booklets prior to sailing, rigging, or launching the Expo 14.2.

The Expo 14.2 is a lightweight, responsive, performance boat, which means that things happen faster than when on larger, heavier boats. Therefore, you should read this manual carefully. Be cautious and practice until you feel confident. Once you have a "feel" for the balance of the boat you can enjoy hours of fun and excitement in a wide variety of wind conditions.

The techniques discussed herein are only general. You may want to purchase one or more of the many books available on sailing theory after you have become familiar with the boat. This manual has been written with the novice sailor and beginning racing enthusiast in mind.

If you have any questions after reading these instructions, please contact your local authorized Catalina dealer or, if necessary, the Customer Service Department at Catalina Yachts, 21200 Victory Blvd., Woodland Hills, CA 91367. (818) 884-7700. Either will be happy to answer your questions.

Good Sailing!

1st Edition September 9, 2002

YACHT NAME



REGISTRATION OR DOCUMENTATION N°	PORT OF CALL
DATE OF COMMISSIONING	HULL NUMBER
OWNER'S NAME	OWNER'S ADDRESS

LENGTH OVERALL 14'-2"	DISPLACEMENT 340 lbs.
BEAM 6'-2"	
DRAFT (BOARD UP) 0'-4"	SAIL AREA 102 SQ. FT.
DRAFT (BOARD DOWN) 3'-6"	
SAIL NUMBER	INSURANCE COMPANY
	INSURANCE POLICY NUMBER

2. Parts of the Boat, Description and Use.

2.1 Hull

When you first put your boat into the water, you will want to complete a preliminary check of the hull and centerboard well. The way to tell if you have any minor leakage problems is to sail the boat in the normal manner and then upon hauling out the boat, open the stern drain plug while the boat is still on the trailer inclined on the ramp. You should always check this drain plug prior to sailing and make sure it is tightly closed. If the plastic washer is not seated properly, you may incur leakage around the drain plug so verify that the plug itself is not the source of your leakage before looking any further.

You may experience some small amount of water inside the hull due to condensation. This is negligible and should not be a reason for any concern. Minor leaks can be sealed with a good marine silicone sealing compound if required.

To keep the shine of your boat, use fiberglass polish or wax. Wax on the bottom of the hull is not recommended for racing.

Anti-fouling paint should be applied to the bottom of your Expo 14.2 if it is to be moored in either fresh or salt water for any length of time. There are many brands available. Anti-fouling paint prevents the growth of algae, barnacles, and other fouling organisms on underwater surfaces.

Catalina models are manufactured with an integrally molded blister protection system in the hull laminate. This water absorption barrier material is between the gel coat surface layer and the laminates of the hull. The bottom may be prepared for painting with anti-fouling paint using conventional de-waxing solvents, then sanding the gel coat surface or using a chemical etching type primer.

2.2 Centerboard

The centerboard provides lateral stability for your boat. The board is made of fiberglass and is very strong. However, the outside layer is covered with gelcoat that can chip. Care should be taken to keep the board stored in an up position out of the water. If the board is taken out of the boat, keep the board out of direct sunlight. The condition of the board, especially the leading and trailing edges, can affect speed. Refer to the General Handbook for maintenance and repair if required. To remove the centerboard, unscrew the four screws from the stainless steel plate that holds the board and lift out.

2.3 Hiking Straps

Hiking straps are provided and can be adjusted for more or less slack. Fastenings should be checked before racing to make sure they have not worked loose. A slipped hiking strap can cause you to fall out of the boat and lose control.

2.4 Opening Hatch

The opening hatch allows access to the ice chest and storage area. While sailing make sure the hatch is securely closed as an accidental capsizing can lead to flooding. If opening the hatch is necessary, luff the mainsail (release the mainsheet) until the hatch is securely closed.

3. Rigging Description and Use.

Your new boat will be rigged and commissioned by your Catalina dealer. Your Catalina dealer will be happy to answer any questions you may have and demonstrate the basic operation of your Expo 14.2 by sailing with you after launching. See section 4.1 Mainsail Rigging Diagram on page 7 for rigging your boat. An explanation of the rigging and equipment follows:

3.1 Cordage: All Braided Dacron unless noted.

Item	Function	Diameter	Length	Quantity
A	Inhaul (Furling Line)	3/16"	16' 0"	1
B	Main Outhaul	1/4"	25' 0"	1
C	Mainsheet Lanyard*	3/32"	0' 18"	1
D	Mainsheet	5/16"	37' 0"	1
E	Centerboard Control	5/16"	9'0"	1
F	Centerboard Hold Down**	3/8"	4' 0"	1

* 7x19 wire plastic coated

** Shock cord

3.2 Boom

The boom is made of powder coated aluminum tube and although it is virtually maintenance free, it is a good idea to clean the surface with soap and water from time to time if you wish to maintain a new look. Do not use acetone to clean the boom as this will ruin the powder coated finish. Also when transporting be careful to wrap the boom where it has contact with another surface. This will prevent scratching of the surface.

The boom's short end is inserted into the aft hole on the mast/boom support and is set onto the aft mast step pin before the mast is stepped.

3.3 Mainsail

The mainsail is attached to the carbon fiber mast prior to inserting the mast into the deck. Make sure the screw at the masthead (top of the mast) is tight to prevent head of the sail from rotating independently of the mast. Slide the sleeve of the sail down until the Velcro at the base of the sleeve is securely attached to the Velcro on the mast. Also note the webbing with clips through the clew of the mainsail. The webbing clip acts as a sail tie when the sail is furled.

3.4 Mast

The mast is a carbon composite and has a bearing at its base to allow it to rotate for furling and unfurling the sail. The mast support has a notch that corresponds to extrusions on the mast's bearing case. The extrusions are offset 180 degrees so that the mast locks into place once inserted. To insert the mast, line up the lower bearing extrusion with the notch in the mast support and lower the mast making sure that the forward mast step pin enters the hole in the delrin mast base. Rotate the bearing case until the second notch lines up and the mast will drop and lock into place. A little bit of jiggling may be necessary to seat the mast.

Ball bearings are inside the bearing case; take care to keep sand and dirt away from the bearings. Rinse the bearing case with fresh water and lubricate the bearings and mast base plug with Boeshield T-9 or McLube occasionally to maintain smooth operation.

3.5 Mainsheet

The mainsheet consists of sheet blocks and the mainsheet lanyard, which control the mainsail and boom. For ordinary day sailing, only the general boom position is important. For competitive sailboat racing, the trim of the mainsail becomes critical at all times. The swivel mainsheet block allows you to adjust the position of the mainsail either by letting the sail out when reaching or running, or by hauling the sail inboard when sailing to the weather. Keep your hands on the line even when it is cleated to insure a quick release in the event of a hard puff of wind that might lead to capsizing. Never wrap the sheet around your hands in such a way that it may become impossible to release instantly. See Mainsail Rigging Diagram on page 7.

3.6 Outhaul

The outhaul is a line used to control the curve of the mainsail (called the camber). The heavier the winds, the flatter the sail. This is a general rule and it becomes a critical factor in achieving boat speed when racing. The mainsail is flattened by pulling the clew of the sail out towards the end of the boom. Easing off the tension on the outhaul line will increase the fullness of the mainsail for "light air" sailing conditions. The outhaul is run from the clew through a fairlead at the end of the boom, through a fixed block to a stand-up block on the mast support and is held in place by a cam cleat on the top of the deck, aft of where the boom is inserted. See Mainsail Rigging Diagram on page 7.

3.7 Inhaul (Furling Line)

The inhaul is a line used to control the sail area of the mainsail. With the outhaul tight, lead the furling line through the hole at the base of the mast and tie a figure eight stop knot. Wrap the furling line counterclockwise around the mast about 12 times. Release the outhaul and pull the inhaul line to see if the sail becomes fully furled. If not, wrap the furling line around the mast a few more times. Lead the line through the port cam cleat with pad eye. To unfurl the sail, release the inhaul line and pull on the outhaul. See Mainsail Rigging Diagram on page 7.

3.8 Centerboard Hold Down and Control

The centerboard height can be adjusted while sail to reduce the drag on the boat while running. Before casting off, attach the shock cord to the brass eyebolt on the transom. To raise the centerboard out of the water, pull in the centerboard line and lock in place with the cam cleat. Release the cam cleat to lower the centerboard. See Section 4.3 Centerboard Lifting Assembly on page 9.

3.9 Rudder

The rudder is used to steer the boat. The rudder should always be secured with a locking device while you are underway. If the rudder is not locked onto the stern, the rudder can fall off during a capsizing and you will not be able to steer your boat. If you neglect to properly lock your rudder onto the transom, and in the event you should capsize and lose your rudder, furl your sail immediately and paddle into the dock or shore. **ALWAYS** make sure your rudder pintle locking device is functioning properly before going sailing.

5. Useful, Basic Procedures

5.1 Self-Bailing Cockpit

One of the great features of your boat is the self-bailing cockpit. Should your boat accidentally capsize, the cockpit will automatically drain itself in a matter of seconds. As the boat floats well above the water level, little or no water will remain in the boat when it is righted. If there is any left it will pour out of the transom drains. Always keep transom drain holes clear of obstructions. Note: If the hatch was open and water was taken on, sail to the dock or shore quickly, but safely, and drain the hull by removing the stern drain plug. Be sure to replace the plug before you resume sailing.

5.2 Righting Procedure

Righting the boat is very simple if done correctly. You should practice capsizing your boat on a warm, light-wind day and develop an exact procedure for righting. With a little practice the average skipper can right the boat in 10-15 seconds. Note: Before practicing capsizing, make sure the hatch is securely closed.

The recommended procedure is: As you feel the boat go over, uncleat the mainsail if possible and slide your legs over the side and stand on the centerboard (do not stand on the bottom tip of the centerboard). If this is done quickly the sail will barely get wet and the boat will begin to right.

Your weight will tilt the boat toward you making it quite easy. Now you can roll the rest of your body into the boat. Note here that if you act fast the boat will begin heading into the wind and the pressure on the sail will counter balance your weight preventing a re-capsize to weather. If there was not time to uncleat, you must reach over or swim around and uncleat before proceeding.

For righting when off wind or downwind, again you must first uncleat. The second step is to hang your weight (fingertips) on the tip of the daggerboard and wait for the boat to swing its bow around into the wind. Now, climb on the board while the boat is coming up and follow the procedure described above. If you are not able to board over the side you can board over the transom. Some people find this easier. But here again even though the sail is uncleated, you must let the wind on the flapping sail counter balance your entry so as not to re-capsize.

Remember, do not panic, your boat was designed to float while capsized for short periods. (Note: Float time greatly reduced if hatch is open. Keep hatch securely closed when not accessing interior.)

5.3 Trailering

The Expo 14.2 may be transported on a trailer supplied by Catalina Yachts or your Catalina Dealer. The trailer must be designed to properly support the hull to prevent damage. The use of an improperly designed trailer may result in damage to your hull. Do not carry gear or excessive weight in your boat when on the trailer. Do not store other boats or objects in your boat when on the trailer. The weight of snow or rainwater trapped in the cockpit can damage the hull when the boat is on the trailer. Tie the boat to the trailer securely when trailering but not so tight that the hull is compressed or damaged.

5.4 Basic Knots

Figure of Eight (Stop Knot)

The stop knot is formed at the end of a line to prevent it from running out through a block or fairlead. See Figure 1. Figure of Eight below.

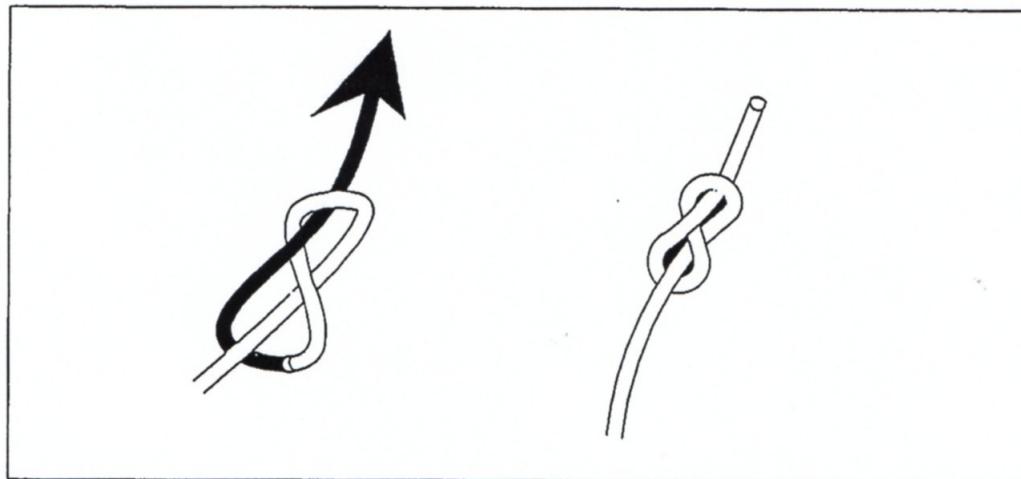


Figure 1. Figure of Eight

The Bowline

The bowline provides a standing loop in the end of a line. It is used to tie lines to sails and to tie the boat to the dock. See Figure 2. The Bowline below.

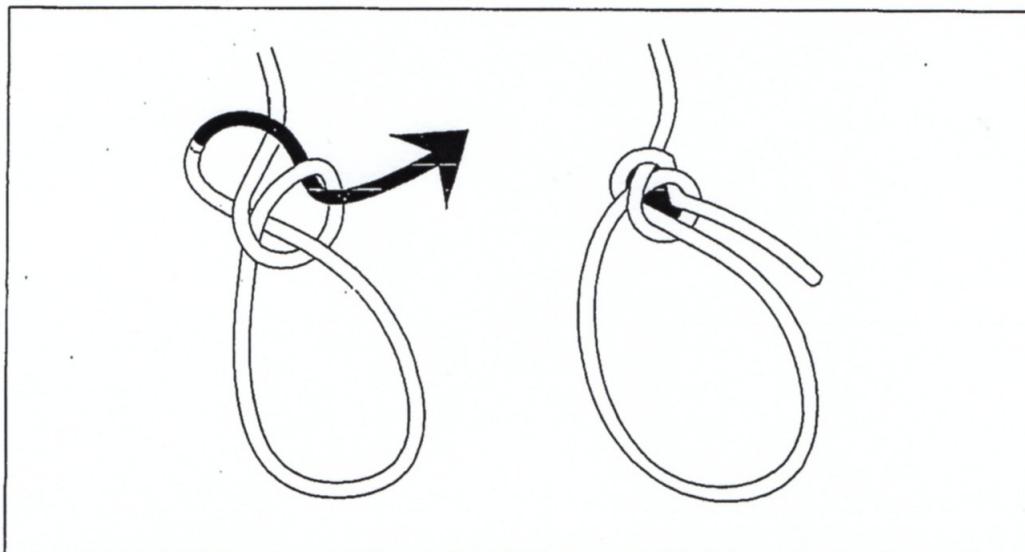


Figure 2. The Bowline

5.5 Sail Maintenance

The sail should never be put away wet. If it is wet after sailing, leave it in a loose bundle and dry it at your first opportunity.

To remove dirt, dried or cracked salt, etc., from the sail scrub the surface with a soft bristled brush and liquid detergent. Avoid harsh powder detergents and stiff brushes, as they may damage the finish or stitching. Also be careful using bleach or any chemical on colored sails; always try a small test area before using any cleaning solution on the entire sail. This approach should work nicely for most applications; more severe stains can be removed from the white sails by the following:

***IMPORTANT: For white sails only.**

Blood: Soak the stained portion for 10-20 minutes in a solution of bleach (Clorox) and warm water; generally 10 parts water to 1 part bleach. Scrub and repeat, if necessary. Rinse thoroughly – particularly nylon – and dry completely.

Oil, Grease, Tar, and Wax: Warm water, soap, and elbow grease seem to be effective. On hard stains, Proprietary Stain Remover and dry cleaning fluids should do the trick. Be careful to remove all fluids, as they can soften the various resinated coatings on sailcloth.

Rust and Metallic Stains: These types of stains are very often the most frustrating and difficult to remove. First, scrub with soap and water, and then apply acetone, M.E.K., or alcohol. As a last resort, you might try a diluted mixture (5%) of oxalic acid soaked for 15-20 minutes. Hydrochloric acid, 2 parts to 100 in warm water, will also work.

Mildew: Hot, soapy water with a little bleach will generally prevail. After scrubbing, leave the solution on the fabric for a few minutes and rinse thoroughly. When using bleach, a residual chlorine smell may be present after rinsing. A 1% solution of Thiosulphate (photographer's hypo) should remove all chlorine traces. Here, again, rinse and dry well.

Paint and Varnish: Acetone and M.E.K. should remove most common paint and stains. In most cases, varnish can be removed with alcohol.

Temperkote or Mylar sails are still new and developmental. At this point in time, avoid most solvents, as they may damage the fabric over a period of time. Soap and diluted bleaches should take care of most stains.

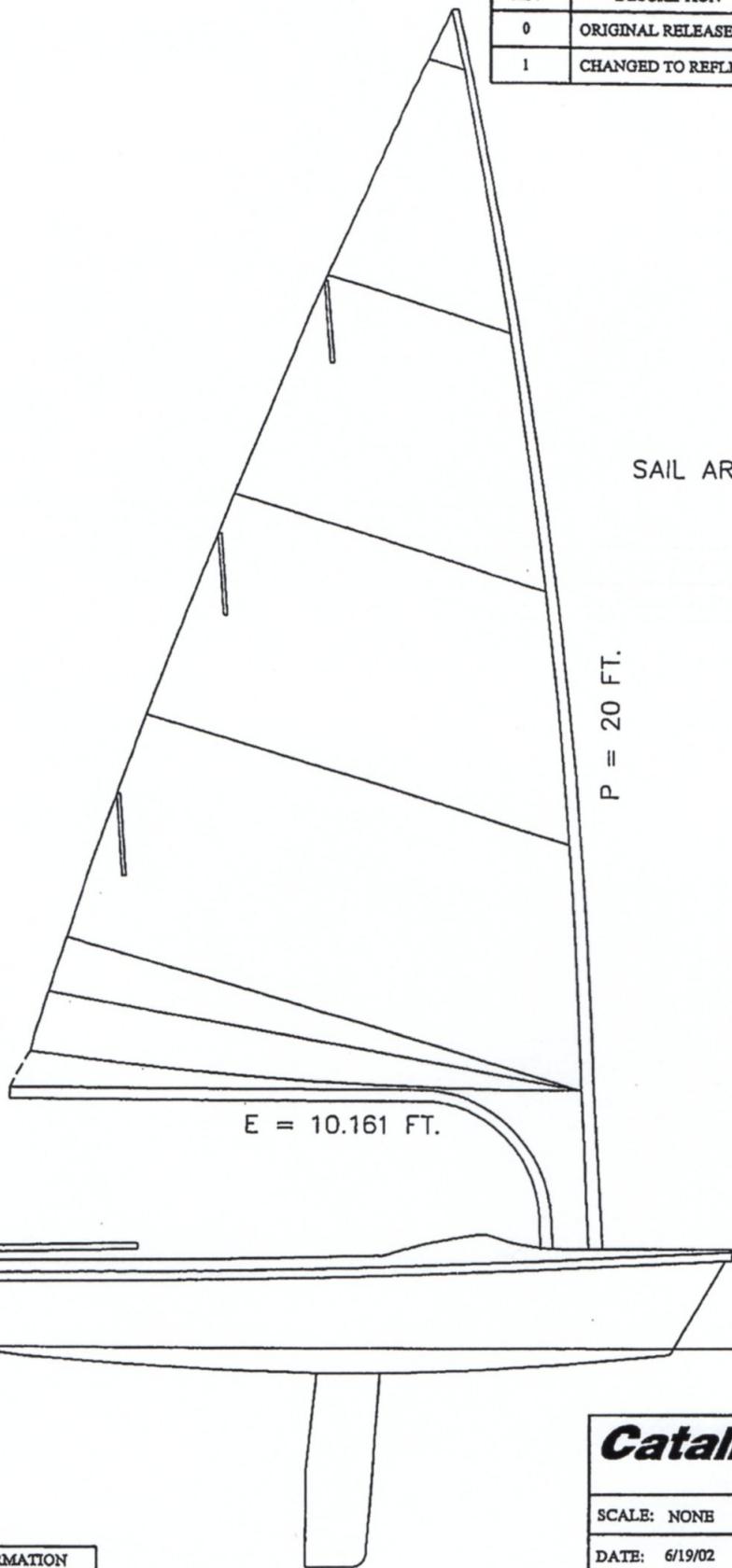
Generally speaking, use all solvents with care. Always rinse and dry thoroughly. It should be emphasized that nylon ripstop spinnaker fabrics are less durable and more sensitive than their polyester counterparts. Bleaches and solvents can ruin nylon if not used properly.

Follow the above guidelines, take your sails into your sailmaker for periodical inspection and you will have many effective seasons of racing and cruising pleasure.

6. Glossary

1. Blocks: A pulley for a line.
2. Boom: Horizontal pole supporting the bottom of the sail.
3. Bow: The front end of a boat.
4. Capsize: When the boat tips over and sail is in the water.
5. Centerboard: A fin that projects down into the water to counteract the force of the sails, preventing the boat from sliding sideways.
6. Cleats: Fittings of various designs used to secure lines.
7. Clew: Back lower corner of the sail.
8. Close hauled: Sailing as close to the wind as possible.
9. Fairlead: A fitting through which a line passes.
10. Foot: The bottom edge of the sail.
11. Grommet: A metal ring set into sailcloth material for a line to attach to or pass through.
12. Gudgeon: A fitting attached to the transom into which the pintle is inserted.
13. Head: Top corner of the sail.
14. Hiking-strap: Foot strap used to lean out (hike out) over the side of the boat.
15. Leech: Back edge of the sail.
16. Lines: The name for ropes when used on boats.
17. Luff: Front edge of the sail.
18. Mast: The vertical main pole supporting the sail.
19. Mast step: The fitting on the boat that holds the mast base in place.
20. Outhaul: Adjustable system at the back end of boom securing the mainsail clew.
21. Pintle: Metal pin upon which a rudder swings.
22. Port: When facing forward, the left side of a boat.
23. Reaching: All sail points between running and close-hauled.
24. Rudder: Attaches to stern of boat and controls direction sailed.
25. Running: Sailing before the wind. The wind is behind you.
26. Shackle: U-shaped metal device used to fasten sails and fittings.
27. Sheets: Lines used to control the adjustment or trim of the sail.
28. Starboard: When facing forward, the right side of a boat.
29. Stern: The back end of a boat.
30. Tack: Front lower corner of the sail.
31. Tiller: The steering arm that moves the rudder.
32. Tiller Extension: An attachment to the tiller allowing easier steering from a hiked-out position.
33. Transom: Back of stern, where the rudder is attached.
34. Turtling: When the boat has turned completely upside-down and mast is pointing downward.

REV	DESCRIPTION	APPROVAL	DATE
0	ORIGINAL RELEASE		6/19/02
1	CHANGED TO REFLECT PRODUCTION SAILS		9/10/02



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SCALE: NONE	APPROVED BY:	DRAWN BY: K.W.N.
DATE: 6/19/02		REVISED 9/10/02
SAIL PLAN		
BOAT: EXPO 14.2		DRAWING NUMBER: 14.2-37001-1

8. Safety Tips

1. Do you have proper registration for your boat? Most states have registration requirements for boats. Make sure you are aware of your own state laws concerning boat registration before launching your boat.
2. Always wear a Coast Guard approved personal flotation device. Even if you are an excellent swimmer, it is still advisable to wear a life jacket when sailing. When clothing gets wet it becomes extremely heavy, making even the most advanced swimmer tire easily.
3. Insurance for your boat should be purchased to protect your investment.
4. Never drag your boat across the beach or dock when launching. Always have someone help you carry your boat and place it carefully into the water. Be sure to stay clear of overhead electric wires when carrying your boat.
5. Do not venture out when the weather conditions are unfavorable or are predicted to become so. Listen to weather forecasts, check with your Harbor Patrol Office and look out for small craft storm warnings.
6. Be especially careful in areas where there may be commercial shipping traffic. Keep well away from shipping channels.
7. Learn the "Rules of the Road." All other sailors will expect you to know them and abide by them. The U.S. Coast Guard (U.S. Dept. of Trans., U.S. Coast Guard, 2100 Second St. S.W., Washington, D.C. 20593-0001) will supply free literature on this. Your local branch or Harbor Patrol Office may have it available also.
8. Sail during daylight hours only. Your Expo 14.2 is not equipped with navigation lights.
9. Purchase all Coast Guard required safety equipment and learn how to use it before the day arrives when it might be necessary to use it.
10. Enroll in a Coast Guard class or other certified boating/sailing class. You will learn a lot and enjoy sailing even more.
11. Do not take more than a safe number of persons aboard your boat when sailing.
12. **CAUTION:** The aluminum boom and other metal parts conduct electricity. Coming in contact with or near electric power lines can be fatal. Stay away from overhead power lines and wires of any kind when launching, underway or stationary.

9. Closing Words

The builder hopes that you will enjoy countless hours of fun and relaxation sailing your Expo 14.2 and you will if you practice proper sailing and safety procedures both on land and on water. Take good care of your boat and take the time to learn the different phases of good seamanship.