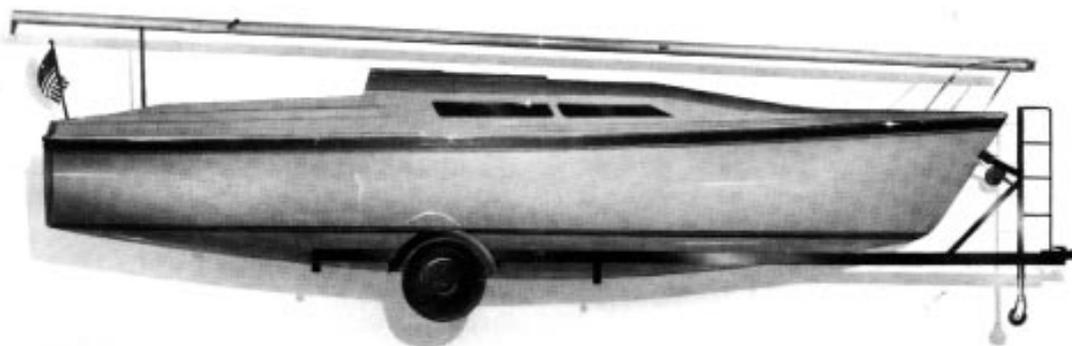


MacGregor 26

OWNER'S INSTRUCTIONS

Page	
2.	SPECIAL SAFETY WARNINGS
4.	GENERAL INFORMATION
4.	RIGGING THE MAST
6.	ATTACHING THE MAST TO THE BOAT
7.	ATTACHING THE MAST SUPPORT WIRES
7.	PREPARING THE BOAT FOR TRAILERING
8.	PREPARING THE TRAILER
9.	TOWING THE BOAT AND TRAILER
9.	RAISING THE MAST
10.	RAISING THE MAST WITH THE OPTIONAL SYSTEM.
11.	ADJUSTING THE MAST SUPPORT WIRES
12.	RAMP LAUNCHING
12.	THE WATER BALLAST SYSTEM
14.	PREVENTION OF ALGAE IN THE BALLAST TANK
14.	RETURNING THE BOAT TO ITS TRAILER
14.	EMPTYING THE BALLAST TANK
15.	CONNECT THE BOOM TO THE MAST
15.	REAR (MAIN) SAIL
16.	FORWARD (JIB) SAIL
17.	REDUCING THE AREA OF THE MAINSAIL
17.	RUDDER
18.	CENTERBOARD
18.	SECURING THE POP TOP
18.	POP TOP COVER
19.	SAFETY RAILS
19.	BOOM VANG
19.	SELF-RIGHTING CHARACTERISTICS
19.	FOAM FLOTATION
20.	BOAT MAINTENANCE
20.	REMOVING THE CENTERBOARD
20.	TRAILER MAINTENANCE
21.	LIMITED WARRANTY



MACGREGOR 26

1. ***** SPECIAL SAFETY WARNINGS *****

DO NOT POWER OR SAIL THE MACGREGOR 26 WITHOUT MAKING SURE THAT THE WATER BALLAST TANK IS COMPLETELY FULL.

Unless the water ballast tank is completely full, with 1200 pounds of water ballast, the sailboat is not self righting. Without the water ballast, the boat will not return to an upright position if the boat is tipped more than 60 degrees, and will capsize like most non-ballasted sailboats. Always, before operating the boat, remove the 1" diameter vent plug located in the compartment under the cabin access ladder, and use your finger to make sure that the water level is no more than 3" below the hole from which the plug was removed. Then reinstall the plug.

MAKE SURE THE TANK VALVE NUT AND THE PLUG ARE SECURE AND TIGHT BEFORE OPERATING THE BOAT.

If the valve is not tight, water will run out of the ballast tank if the boat tips excessively, and self righting stability will be lost. If the 1" plug is not secure, the ballast water will spill out into the boat if the boat tips.

DO NOT ALLOW ANY PART OF THE BOAT, TRAILER, MAST OR RIGGING TO COME IN CONTACT WITH ANY SOURCE OF ELECTRICAL POWER.

If your mast or any part of your boat or rigging comes in contact with a power line, you could be killed or injured. Don't sail your boat into a power line. Don't step your mast into a power line, or don't move your boat, on its trailer, into a power line. Masts, wire shrouds, or wet fiberglass are good conductors of electricity and can carry current directly to you. Look up and make sure you will be clear of sources of power before doing anything with your boat. Don't remove the warning decal from your mast. It may help you remember to look and avoid a major calamity.

If you are caught in an electrical storm, don't touch anything that is metal, including the mast, shrouds, boom, lifelines, rudder, tiller or metal hardware. If possible, don't touch anything that is wet. Many experts recommend that a heavy gauge copper wire be securely fastened to one of the shrouds and allowed to hang in the water to carry off the electricity from a lightning strike.

MAKE SURE THAT YOU TOW YOUR BOAT WITH A LARGE ENOUGH CAR. CHECK WITH YOUR CAR

MANUFACTURER OR DEALER TO DETERMINE IF THE WEIGHT OF THE BOAT AND TRAILER IS WITHIN YOUR CAR'S TOWING CAPACITY.

LOAD YOUR BOAT SO THE WEIGHT ON THE TRAILER HITCH IS BETWEEN 200 AND 250 POUNDS.

If the weight is less, the trailer will tend to swerve dangerously from side to side. If the weight is more, an excessive load will be placed on the rear end of your car, and the trailer will be very difficult to hitch or unhitch. To protect your back when removing the trailer from the car, use the hitch jack or have an adult hang on the back of the boat to take some weight off the tongue.

NEVER LOAD THE BOAT AND TRAILER MORE THAN THE AMOUNT SHOWN ON THE CERTIFICATION DECAL NEAR THE HITCH. ON THE LEFT (PORT) SIDE OF YOUR TRAILER (2750 POUNDS).

Remember, the maximum gross vehicle weight (G.V.W.R.) includes the weight of the trailer as well as the weight of the boat and all gear in the boat. You may not deduct the weight that is carried on the hitch of the car in arriving at the G.V.W.R. Check your state law to determine if there are any other weight or braking requirements that must be met.

DO NOT TRAILER THE BOAT WITH ANY WATER IN THE BALLAST TANK. THE 1200 POUNDS OF WATER WILL SEVERELY OVERLOAD THE TRAILER AND THE CAR.

Open the valve and drain the tank completely before trailering. Leave the valve open when trailering.

SECURE THE POP TOP IN THE DOWN POSITION AND CLAMP THE FOREDECK HATCH SHUT IN ALL BUT THE MOST GENTLE OF WINDS.

Strong gusts can unexpectedly cause the boat to lean excessively, possibly allowing water to enter the hatch and flood the boat. Unsecured hatches can be blown shut, and may injure someone on board.

BE READY TO RELEASE SAIL CONTROL LINES (SHEETS) QUICKLY IF A GUST OF WIND CAUSES THE BOAT TO LEAN EXCESSIVELY.

Lines should be free of kinks and knots so they will run freely through the pulleys when it is necessary to let the sails out quickly. Letting the lines go is your best protection from a knockdown. For best performance and safety, keep the boat from leaning (heeling) more than about 20 to 25 degrees.

BATTERIES ARE DANGEROUS. TREAT THEM CAUTIOUSLY.

Batteries can produce explosive gas, corrosive acid and levels of electrical current high enough to cause burns. Always wear eye protection or shield your eyes when working near any battery and remove all metal rings and jewelry. Never expose a battery to open flames or sparks. Do not smoke near a battery. It could blow up. Do not allow battery acid to contact eyes, skin, fabrics or painted surfaces. Flush any contacted area with water immediately and thoroughly. Get medical help if eyes are affected. Do not charge the battery, adjust post connections or use booster cables without making sure the battery compartment is properly ventilated. When charging the battery, carefully follow the instructions on the charger. Keep the battery filled to the proper level with distilled water. Always keep vent caps tight. Do not allow metal tools or metal parts to contact the positive (+) terminal and the negative (-) terminal or any metal connected to these terminals.

MAKE SURE THE WHEEL LUG NUTS ARE TIGHT BEFORE TRAILERING THE BOAT.

MAKE SURE THE OUTBOARD MOTOR AND MAST ARE ATTACHED FIRMLY TO THE BOAT WHEN THE BOAT IS BEING TRAIERED.

Put an extra cable on the outboard and make sure the clamps are tight. Having it bounce off onto a busy street could be lethal. The mast should be bolted to the bow pulpit and properly secured at the rear (wood) mast carrier. Just tying the mast is not enough. Unless it is bolted, with a lock nut that won't vibrate loose, it could shoot forward and do some real damage if the car stops quickly.

DON'T STORE FUEL CANS INSIDE THE BOAT.

Gas fumes are explosive. Keep all gasoline containers out of the boat and on deck.

DO NOT REMOVE ANY OF THE FOAM FLOTATION BLOCKS

Loss of any of the foam could seriously impair the ability of the boat to stay afloat in the event of damage.

IF THE CABIN OF THE BOAT IS ENTIRELY FILLED WITH WATER. AND THE BOAT IS DEPENDENT ON THE FOAM FLOTATION TO KEEP IT AFLOAT. IT WILL BE VERY UNSTABLE. AND MAY TURN UPSIDE DOWN.

WHEN RAISING AND LOWERING THE MAST, DON'T STAND ANYWHERE WHERE THE MAST OR SUPPORT WIRES COULD FALL ON YOU IF SOMETHING. OR SOMEONE. LETS GO.

BEFORE TRAILERING THE BOAT, MAKE SURE THE NOSE OF THE BOAT IS TIED SECURELY TO THE TRAILER.

The cable that secures the boat to the trailer should be clipped to the stainless eye on the nose of the boat and fastened securely to the winch drum. The winch should be cranked tight, pulling the nose firmly into the rubber block on the trailer. Make sure the winch latch is secure to keep it from unwinding. Don't release the cable until the boat is in the water.

BE EXCEEDINGLY CAREFUL WHEN SAILING IN HIGH WINDS. LEARN BASIC SEAMANSHIP.

The Coast Guard Auxiliary Power Squadrons offer excellent courses at low cost. This is an excellent investment.

ALWAYS SHUT OFF THE OUTBOARD MOTOR WHEN THE BOAT IS NEAR PEOPLE IN THE WATER. EVEN ON LOW HORSEPOWER MOTORS, THE PROPELLER CAN DO SERIOUS DAMAGE.

NO PART OF THE WATER BALLAST VALVE (UNDER THE BOAT) SHOULD GO BELOW THE EXTERIOR SURFACE OF THE HULL.

If the valve sticks out below the boat bottom, it can hang up on the trailer as the boat goes on or off, causing damage to the valve or to the hull.

EVERY TIME YOU LAUNCH THE BOAT. MAKE SURE THAT THE WATER BALLAST VALVE IS FLUSH AGAINST THE BOTTOM OF THE HULL. THAT THE RUBBER SEAL IS CLEAN AND IN GOOD SHAPE. AND THAT THE HULL UNDERNEATH THE RUBBER SEAL IS CLEAN.

The valve must seat perfectly against the hull to prevent leakage and loss of water ballast. Don't leave it open when the boat is in the water. Marine growth might get in between the valve face and the hull, allowing leakage.

Frequently check the valve for damage.

2. GENERAL INFORMATION

TERMINOLOGY:

In the following instructions, we have tried to avoid the use of nautical terms wherever possible. If you are new to the sport, having to learn a new language while you are learning to rig and sail the boat can be grim. If you are an experienced sailor, be patient with our use of non-nautical words, rather than the more technically correct sailing language.

JOBS THAT ONLY HAVE TO BE DONE ONCE:

Much of what you will read in the following instructions involves the initial setup and rigging of the boat, and will only have to be done once. For example, you will find detailed information on rigging the mast and connecting the mast support wires and lines to the mast. Once this is done, it will not have to be redone each time you sail. So don't be intimidated by the length and detail of these instructions.

TOOLS:

You will need two 7/16 end wrenches, two 9/16 end wrenches and a pair of pliers to do all of the assembly work. You can get by with the pliers and a small crescent wrench.

BOWLINE KNOTS:

It is essential to learn to tie a bowline knot. It is used all over the boat to tie stuff together. It is shown in Photo 1. Pull the loops tight. It will not jiggle loose, and can be easily undone even after being pulled tight under really heavy loads.



Photo 1 Bowline knot

3. RIGGING THE MAST

First, take a look at the photographs on the following pages to get a general idea of what the complete mast and rig will look like.

RIG BOX:

Open up the box of rigging that comes with the boat and do a complete inventory to make sure everything is there. A checklist, showing each item, is packed with the parts.

REAR MAST SUPPORT WIRES: (BACKSTAY)

Lay the mast on the ground. Start at the top and install the rear mast support wire (31' 4 1/2") to the stainless fitting at the top of the mast as shown in Photo 2. Note that the end with the stainless steel strap does not go on the mast. Use a 1/4" x 11/2" bolt and lock nut. Run the nut down as far as it will go.



Photo 2 Rear mast support wire attachment (backstay)

TOP SIDE SUPPORT WIRES: (UPPER SHROUDS)

Install the top side wires (2 ea, 22' 9 1/2") at the 3/8" hole located 6' from the top of the mast. Use a 3/8" x 4" bolt and lock nut. A pair of 1" x 6" stainless steel straps also mounts on the bolt. The entire assembly is shown in Photo 3.



Photo 3 Top side support wires (upper shrouds)

FORWARD SUPPORT WIRE STRAPS:

Make sure the 1" x 6" stainless steel straps are mounted with the rounded center surface of the straps contacting the mast (see Photo 3). The side edges of the straps should point away from the mast. If the straps are mounted wrong side out, the edges of the tangs may cut into the mast. Note that the straps are outside of the fittings on the end of the wire. Note also that the straps slope toward the front of the mast, and not toward the rear of the mast (the side with the sail feed slot). Tighten the nut tight, but not tight enough to deform the mast or fittings. Use the locknut that is provided.

FORWARD SUPPORT WIRE: (FORESTAY)

The forward support wire (23' 5 1/4") is attached to the bottom end of the 1" x 6" stainless straps with a 1/4" x 2" bolt and lock nut as shown in the Photo 4. Note that a pulley is mounted on the same bolt. This pulley is used for the rope that hoists the forward sail. Use a lock nut and run it down tight.



Photo 4 Forward mast support wire and jib pulley

MIDDLE SIDE SUPPORT WIRES: (LOWER SHROUDS)

The middle side wires (2 ea, 11' 11 1/2") and spreader U brackets mount to the 3/8" hole through the mast located 11' from the bottom of the mast. The assembly is shown in Photo 5. Use a 3/8" x 4" bolt and lock nut. Tighten the nut tight but not so tight as to deform the mast. The straps that are attached to the U brackets should point about 10 degrees to the rear of the mast.



Photo 5 Middle side support wires (lower shrouds)

SPREADER TUBES:

Connect the spreader tubes to the U shaped brackets as shown in Photo 6, using 1/4" x 2" bolts and lock nuts. The nuts go toward the bottom end of the mast. Run the nuts down just snug enough so that the spreaders can pivot around the bolt with a slight amount of friction.

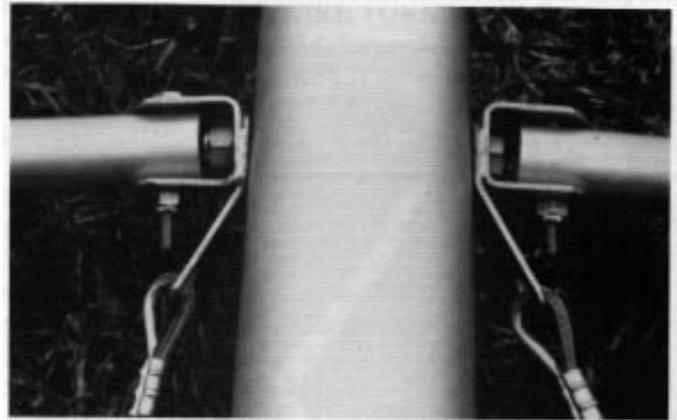


Photo 6 Spreader tube attachment

Connect the spreader tubes to upper mast support wires as shown in Photo 7.

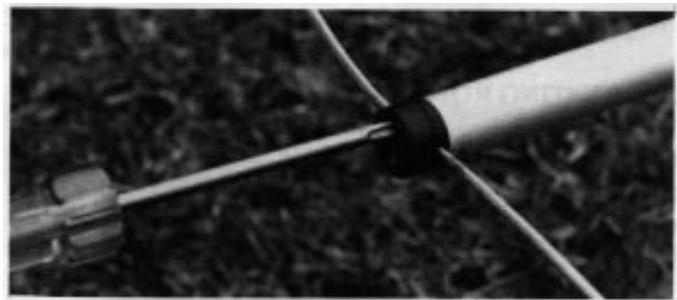
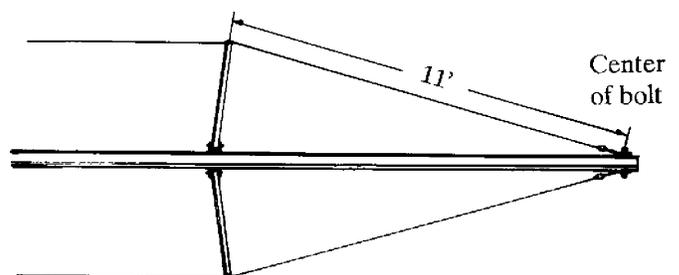


Photo 7 Spreader tube ends

The end of the spreader tubes should be located as shown in Drawing 8. The measurement should be taken with the wire pulled tight. Make sure the spreader end fittings are clamped securely to the upper wires. Don't tighten the small screws too tight or the plastic tips may strip.



Drawing 8 Spreader tube ends: wire position

MAINSAIL HOISTING ROPE: (MAIN HALYARD)

The rope that hoists the rear (main) sail passes through the pulley at the masthead (Photo 9) and the forward end ties off to the cleat on the right side of the mast (right when looking forward). Use a bowline knot and tie a twist pin U shackle to the aft end of the hoisting line (the end nearest the sail feed track).



Photo 9 Mainsail hoisting rope

JIB HOISTING ROPE: (JIB HALYARD)

The rope that hoists the forward Jib) sail passes through the pulley near the top of the forward mast support wire and ties off to the cleat on the left side of the mast. Tie a twist pin U shackle (with a bowline knot) to the forward end of the hoisting rope (Photo 10).

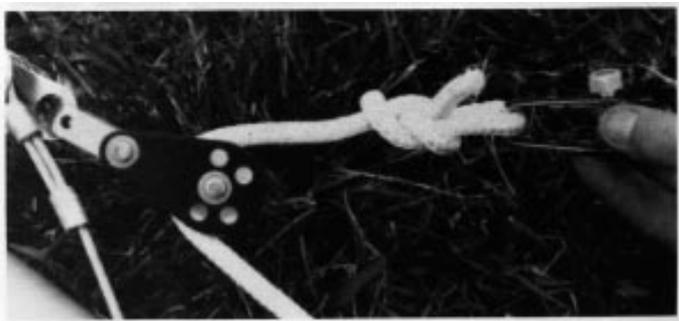


Photo 10 Jib hoisting rope

4. ATTACHING THE MAST TO THE BOAT FOR TRAILERING AND SAILING

SECURING THE MAST TO THE BOAT: The mast is carried on the boat with the bottom end forward and the slotted side down. Bolt the mast step to the forward rail with a 1/4" x 4" bolt and lock nut, as shown in Photo 11. Use locknuts on all hardware holding the mast to the boat.



Photo 11 Mast bolted to front rail

Make sure the 4" bolt is tight. Use the 9/16 wrenches. You will not believe the chaos if the front end of the mast gets loose while you are trailering. If you just tie the mast to the bow rail, a sudden stop could catapult the mast into your car or even into the car ahead of you. Again, the bolt is better than rope. Extra rope tie downs are always a good precaution.

The wood mast support slips into the brackets at the rear of the cockpit. A thumb screw in the bracket is tightened into the wood to keep the wood from jumping out. Tie the mast securely into the V notch in the top of the wood support.

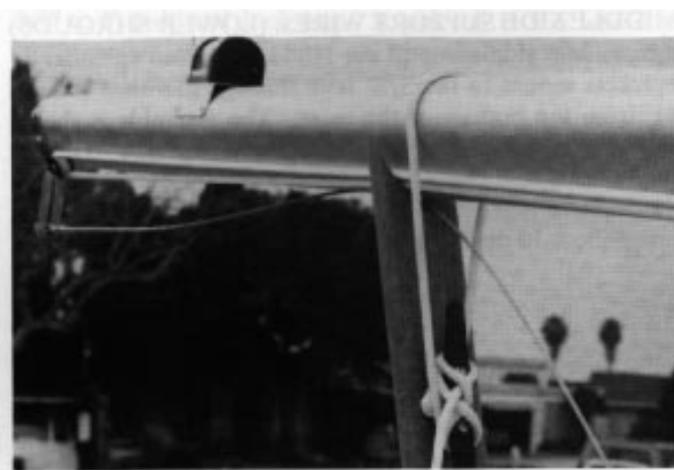


Photo 12 Wood mast support

A 6' long piece of 5/16" line secures the center of the mast to the mast hinge to keep the center of the mast from bouncing while the boat is being towed.

5. ATTACHING THE MAST WIRES TO THE BOAT

WIRE ADJUSTING CHANNELS: Attach a wire adjuster channel to the bottom end of the top and middle mast support wires, and to the rear mast support wire. (Photo 13)



Photo 13 Wire adjusting channels

Use a 1/4" clevis pin and cotter ring, and mount them exactly as shown in the Photo 13. Put the clevis pin through the second hole down on the channel and thru the end hole in the slide.

Connect the wire adjuster channels to the deck straps with 1/4" clevis pins and cotter rings. The top and middle mast support wires attach as shown in Photo 14. Note that the open side of the adjuster channels face each other. The top wire goes in the rear hole.

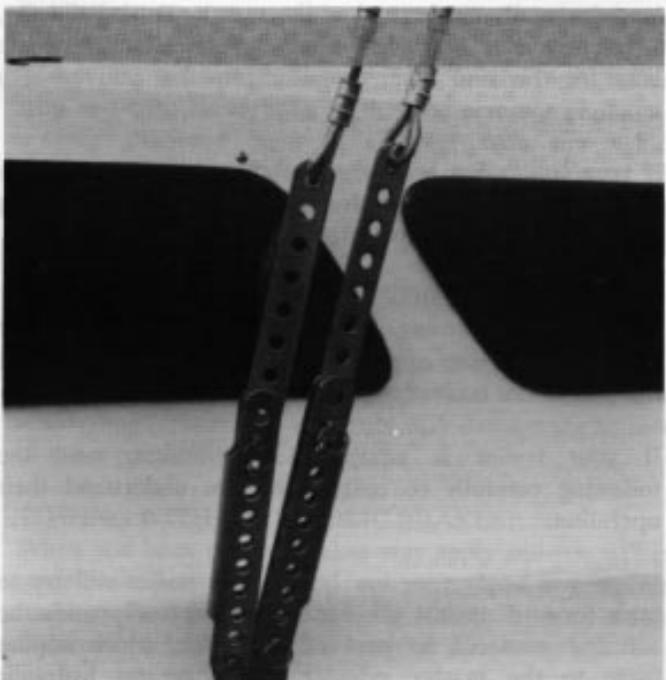


Photo 14 Wire adjuster channel attachments

Connect the rear mast support wire to the deck strap at the rear of the boat in exactly the same manner as the side wires.

FORWARD SUPPORT WIRE TURNBUCKLE:

Attach a turnbuckle to the forward mast support wire. Adjust the turnbuckle so that it is 1/3 closed.

6. PREPARING THE BOAT FOR TRAILERING

SECURE ALL GEAR:

Stow the boom, rudder, tiller and all loose gear inside the cabin. Leave enough separation to avoid chafing. Make sure the outboard motor is clamped tight to the boat. Add a safety cable to make sure it stays with the boat. Most motors have holes in the bracket to permit bolting the bracket to the boat. This is a good idea.

Don't load up the cockpit with gear and people unless the rear of the boat is blocked up. The weight could cause the trailer and boat to tip backwards.

Secure the trailer winch cable to the bow of the boat as shown below.

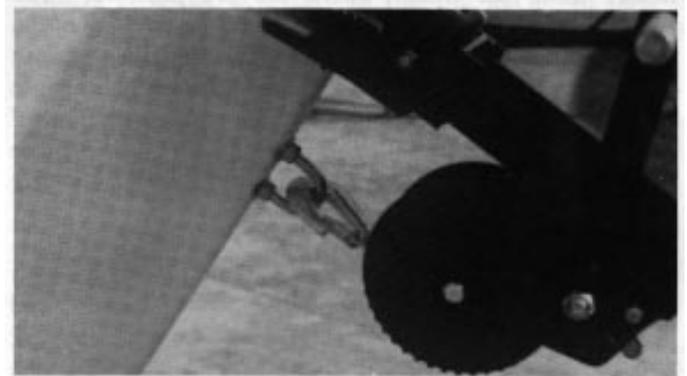


Photo 15 Trailer winch cable

Keeping tension on the cable, winch the nose of the boat snugly into the rubber bow support. Make sure these connections are good. If the cable comes loose, the boat could slide off the trailer and end up on the street, or worse.

As an extra security measure, tie a line to one of the trailer side rails near the rear end of the trailer. Pass the line across the boat. Pull it tight, and tie it to the other trailer rail.

Carefully store and secure all lines and mast support wires to avoid entanglement in the trailer wheels while towing.

7. PREPARING THE TRAILER

LUG NUTS:

It is the owners responsibility to check the lug nuts that secure the wheels to the axle before using the trailer. The wheels may have been removed in order to ship the boat to you or your dealer, and it is important for you to check to see that the lug nuts have been properly tightened. If they are loose, you may lose a wheel, with serious consequences. They should be TIGHT. The proper setting, using a torque wrench, is 90 to 95 foot pounds. Don't move the trailer one foot before checking these nuts.

TIRE REGISTRATION:

It is a federal law that the first licensed purchaser of any vehicle with tires register the tires with the vehicle manufacturer. This is done by completing the Tire Registration data on your warrantee card and returning it to MacGregor. Your name, address, tire serial numbers, trailer serial number and date of purchase must appear on this card.

TIRE PRESSURE:

Before using the trailer, check the tire pressure. The recommended pressure can be found on the sidewall of the tire near the tire size. Always check the tire pressure when the tires are cold. Under inflation can cause excessive sway at certain speeds and could cause loss of vehicle control. Over inflation could cause a tire to blow out, which also is very dangerous. Check tire pressure at frequent, regular intervals.

HITCHING UP:

Place the trailer coupler over the ball on your car, and make sure the snap latch is all the way down and locked. Try to lift the trailer off the ball to make sure the hitch is securely fastened to the ball. Insert a 1/4 x 1 1/2" bolt and lock nut thru the locking hole in the tongue to make sure the trailer doesn't jump off. Tongue weight should be between 200 and 250 pounds.

The ball should be 2" in diameter. You are responsible for making sure that the trailer hitch ball is secured properly to your car. Get some qualified help in mounting the hitch to the solid structure of your vehicle.

SAFETY CHAIN:

Secure the safety chain to a solid bumper brace or through the hole normally provided in your hitch. Leave enough slack so that the trailer and car may turn without putting tension on the chain. Secure the end of the chain to itself with the locking device mounted on the end of the chain. This must be a solid connection.

TOTAL WEIGHT:

The weight of the boat, trailer and all other items cannot exceed 2750 pounds. The empty boat weighs 1675 pounds.

The trailer weighs 525 pounds. All other gear cannot exceed 550 pounds.

LIGHT WIRES:

Our trailers come with a trunk harness (you will find it plugged into the trailer harness near the hitch). The exposed ends of the trunk harness must be wired into the light wiring of your car. The other end should be plugged into the trailer wiring harness. The wires on the trunk harness and trailer wiring are color coded as follows:

White - Ground

Brown - Running lights or tail lights

Yellow - Left turn signal and brake light

Green - Right turn signal and brake light

Make sure you have a good ground or you won't have lights. The light mounting brackets and ground wire must contact metal (you may have to scratch through the paint). Don't use the trailer unless all lights are working. You must have the following:

1 red tail light at each rear corner of the trailer.

1 red clearance light mounted on the side of each tail light.

1 clear license plate illuminator.

1 amber clearance light mounted at the outboard rear corner of each fender. (These must be visible from the front.)

You must have 2 red lights at the extreme rear end of the load (normally on the end of the mast). During the day, a red flag may be used. Here again, check your state laws for this and other requirements that you have to meet.

If your trailer has brakes, make sure the ground wire is connected to the trailer frame, and not to the moving portion of the brake actuator.

HYDRAULIC (SURGE) BRAKES:

State laws concerning brakes vary. Check with your dealer or with your appropriate state agency to determine whether or not trailer brakes are required in your area.

If your trailer is equipped with brakes, read the following carefully to make sure you understand their operation.

When you apply your car brakes, the trailer will try to push forward against the car. This push compresses the actuator mounted as part of the hitch, which applies force to the master cylinder, which creates hydraulic pressure to operate the

trailer brakes. The harder you stop, the more hydraulic pressure you generate, and the more forcefully the brakes will be applied. The safety chain must be loose enough to permit free motion of the actuator assembly. Brakes work poorly when wet.

BREAKAWAY CHAIN:

The surge brake system has a breakaway chain that connects to the car (this is not the same as the safety chain mentioned above). If the trailer gets loose from the car, the breakaway chain will cause the brakes to engage and try to stop the trailer. Make sure that this chain is fastened securely to the tow vehicle. It should have some slack so that it will not engage the brakes while the trailer is still connected to the car. The chain should be loose enough, even during turns, so that the breakaway lever is released (pointing all the way to the rear of the trailer) while the car and trailer are engaged. Check this each time before you use the trailer. No teeth on the breakaway lever should be engaged in the leaf spring. Accidental application of the lever will cause the trailer brakes to engage, drag, heat up and perhaps burn out. Do not use the emergency breakaway system as a parking brake.

ACTUATOR OPERATION:

The actuator linkage and the sliding mechanisms should work freely through the full range of travel. Do not mistake shock absorber resistance in the system for binding. Nylon bearings and the plated shafts do not normally need lubrication, but should be checked periodically. If you encounter erratic or unusual braking performance, investigate the cause immediately. The trailer should not push the tow vehicle, or try to jackknife during stops. The brakes should release when the trailer is pulled from a dead stop. To be sure the brakes are releasing properly, pull gently from a dead stop and then slowly stop so that the actuator ends up in a fully extended position. Then, with the vehicle stopped, tap each brake drum with a metal object. The brake drums should ring clearly when the brakes are released.

8. TOWING THE BOAT AND TRAILER

TURNING:

Don't try to make really tight turns. Extreme turns, while going forward or backwards, may damage the actuator or other parts of the trailer.

TOWING WITH HYDRAULIC BRAKES:

When you back up, the brakes may apply and you will get some brake pressure. Damp brakes may tend to seize when backing. Back slowly and steadily. You may have trouble with brake actuation if you try to back up a steep hill or driveway.

Make sure that the trailer is towed in a level position. It should never be towed with the tongue lower than the rear of the frame, as this will cause the brakes to activate and stay on during normal towing.

Make sure your car brakes stay dry. They work poorly when wet.

9. RAISING THE MAST

ATTACH THE MAST TO THE MAST HINGE:

Unbolt the mast from the forward rail, and untie it from the hinged mast step and the rear wood support. The 3/8" x 4" bolt and lock nut that holds the mast to the forward rail for trailering also serves as the pivot pin for the hinged mast step. With the rear of the mast supported by the wooden support in the cockpit, move the forward end on the mast back to the hinge area.

Insert the hinge pin (see Photo 16) and make sure the lock nut is on tight enough that the plastic seal engages the threads. (You will need two 9/16" end wrenches for this.) It is not necessary to run the nut down tight on the hinge plates. Just make sure the nut is on tight enough so that you can't turn it with your fingers.

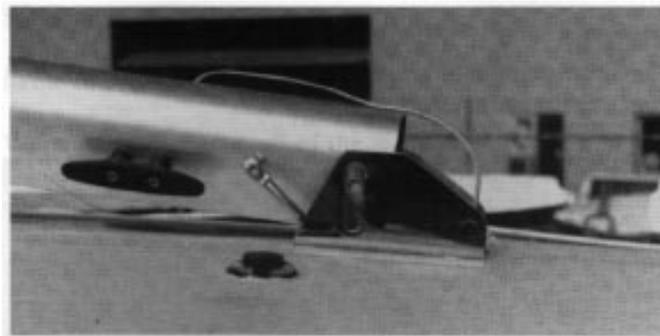


Photo 16 Mast hinge

LIFTING THE MAST:



Photo 17 Raising the mast

Make sure that the mast wires are not entangled on the boat or trailer, and then raise the mast. This is best accomplished by standing on the cabin top, aft of the mast, and lifting the mast into position. Be careful not to hit a power line with the mast or rigging. You could be injured or killed.

The mast lifting task is made much easier if a second person stands on the foredeck and pulls on the forestay as the mast goes up. Look up to make sure the wires are not kinked on their attachment fittings, or tangled on the boat or trailer.

CONNECTING THE FORWARD MAST SUPPORT WIRE:

After the mast is up, connect the forward mast support wire turnbuckle to the forward hole in the foredeck fitting. Do not release forward pressure on the mast until the forestay is connected.

If you have to move the boat after the mast is up, be watchful that you don't run it into a powerline.

Be sure to connect the mast light wire to the deck socket.

10. RAISING THE MAST WITH THE OPTIONAL SYSTEM

GENERAL:

The following photo gives you an idea of how the optional mast raising system works.



Photo 18 Optional mast raising system

After the mast pivot pin is in place, with top end of the mast resting in the mast crutch in the cockpit, connect the side support lines as shown in Photo 19.

Using a bowline, tie an S hook on the end of each of the 2 ten foot long lines. Hook the hooks into the metal eyes on the deck beside the mast, and secure the other ends to the cleats on the mast (located 5 feet above the bottom of the mast). Pull these lines tight and secure them really well. If they get loose, the mast will fall sideways as it goes up.

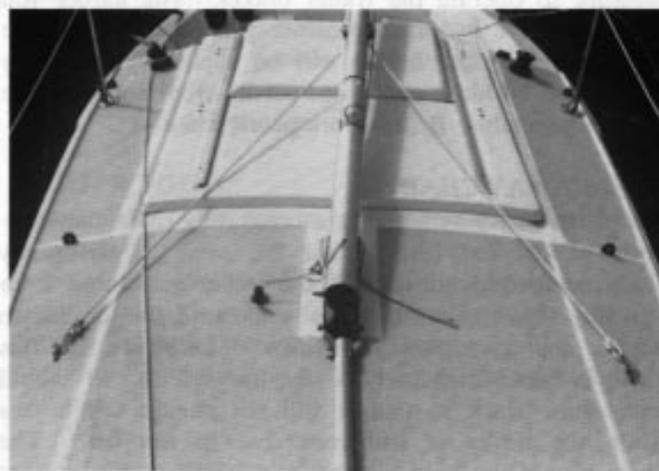


Photo 19 Side support lines

Then connect the end of the mast raising pole to the mast as shown below. Use a 3/8" x 4" bolt and lock nut.



Photo 20 Mast raising pole attachment

Rig the block and tackle to the end of the pole as shown in the following photo. An S hook on the bottom block hooks to the foredeck mooring cleat.



Photo 21 Mast raising block and tackle

Tie the end of the jib halyard to the eye on top of the pole. Use a bowline knot as shown in Photo 21. Pull on the other end of the jib halyard until the pole end is about 30" above the deck. Then tie off the end of the other end of the halyard to one of the cleats on the mast, (located about 7" above the mast hinge). Make sure the line is really secure at both ends. If it comes loose, the mast will fall and someone may get badly hurt.

Take the end of the block and tackle line to the cockpit. Take 3 wraps clockwise around the jib winch on the starboard side (the right side when facing forward), insert the winch handle securely in the winch and begin cranking up the mast. The loads will be heavy at first, but lighten as the mast goes up.

Look around to make sure all mast wires are clear and free of tangles. Again, make sure you are clear of all overhead power lines and that the mast won't hit them when it goes up or when you have to move the trailer after the mast is up.

Look up at the rig to make sure that none of the loops in the wire ends are kinked or hooked over the stainless steel fittings to which the wires attach.

All of the comments in the previous section still apply to raising the mast. The optional system simply reduces the physical effort involved in the mast lifting.

Don't stand under the mast or under the mast raising pole. If something lets go, or the mast falls, these are not the places to be.

When the mast is up, pull the rope tight, and tie the line securely to the winch. Don't use the cam cleat near the winch to secure the line. These are not that secure. It is one thing for a sail to get loose, quite another for the mast to fall down.

Now connect the bottom end of the forestay turnbuckle to the forward hole in the stainless steel fitting at the nose of the boat. Don't release tension on the mast raising line until the forestay is secure and the clevis pin is secure.

Make sure all the pins are securely in place and the cotter pins are opened and secured. Tighten down on the turnbuckle so the rig is snug. Secure it with its cotter pins. One nice thing about this setup is that you will not have to adjust the turnbuckle after it is once set. The pulleys provide sufficient power to stretch the rig enough to remove the pin. (This is the only disconnect that you have to make for raising and lowering the mast.)

To lower the mast, reverse the process used for either the standard or optional system. Once again, watch for power lines. Before you lower it, put the wooden mast support in its holders in the cockpit. Otherwise the mast will come down on the cabin hatch and maybe mar the finish.

Remember, the load gets greater as the mast gets lower. Be prepared. Get a good grip on the line or the mast and don't be fooled by the very small loads while the mast is close to the up position. With the optional mast raising system, it is best to snub the line around the winch to take some of the load off of you.

We leave you with one repeat warning. People have been killed or badly injured as a result of masts or support wires coming into contact with overhead power lines. Be watchful whenever you rig, launch, trailer or do anything else with your boat that might involve contact with power lines. If there is a threatening power line anywhere near areas where you sail, call or write to the power company and try to get them to move it or bury it. Notify us and we will also lean on them. Don't remove the warning sticker on the mast. The repeated warnings may get boring, but power lines are life threatening risks.

11. ADJUSTING THE MAST SUPPORT WIRES

MAST RAKE:

The mast, when set properly, should lean about 3 degrees to the rear of the boat from vertical.

When properly tuned, all of the mast support wires should be quite snug. Use the following sequence to set the rigging.

REAR SUPPORT WIRE: (BACKSTAY)

Adjust the rear mast support wire to give the mast the proper fore and aft position.

FORWARD SUPPORT WIRE (FORESTAY)

Take up the slack in the forward mast support wire by adjusting the turnbuckle. At this point, tighten it enough to give a slight forward bend to the center of the mast.

TOP SIDE SUPPORT WIRE: (UPPER SHROUD)

Adjust the top side mast support wires so that the mast is straight from side to side. Try to make them snug. Note: The wire adjuster channels are designed as "verniers" to provide adjustments in 1/8" increments. This is accomplished by having the holes in the wire straps spaced at different intervals than the holes in the adjuster channels. As the wire is extended every 1/8", a new set of holes will line up, allowing very precise tuning adjustments. A small screwdriver can be inserted in one of the sets of non-aligning holes to provide leverage to get tension on the wires while the clevis pin is being inserted in the proper holes. Use the 1/4" clevis pins and cotter rings to connect the channels to the straps fastened to the support wires.

These channels are stronger than turnbuckles, better able to stand the bending loads resulting from raising and lowering the mast, and less likely to accidentally come loose.

MIDDLE SIDE SUPPORT WIRES: (LOWER SHROUDS)

Adjust the middle side support wires as described above. Don't get them too tight or the center of the mast will be pulled toward the rear of the boat.

ALTERNATE METHOD OF TENSIONING THE WIRES.

With all the rigging in place, grip the upper wire about 4 feet above the deck and pull inboard toward the center of the boat. The lower wire will go slack and allow another hole to be taken up in the adjuster channel. To adjust the upper wires, pull inboard on the lower wire. This method takes 2 people, and can get the rigging far tighter than is desirable.

You can also loosen the forward turnbuckle, make the necessary adjustment in the side wires, and then retighten the turnbuckle. The final tightening of the forward wire provides the final tightening of the entire rig.

MAST APPEARANCE AFTER PROPER TUNING:

In general, the mast should be reasonably straight when no sails are up. When sailing in heavy winds, the masthead should curve gently back and downwind. The downwind wires will be slack when sailing hard. The rear support wire will be somewhat slack when sailing into the wind, since the mainsail takes over the task of supporting the mast.

SECURE ALL COTTER PINS AND RINGS:

Make sure all the cotter pins and rings are in place and the cotter pins are opened and secured.

INSPECTION OF THE RIGGING:

It is a good idea to periodically inspect the mast and rigging. Look for broken strands in the wire bundles, signs of wear, and for kinks in the wire. Inspect the nicopress swagings to make sure the wire hasn't slipped thru the fittings. Replace any wire with problems.

12. RAMP LAUNCHING

Remove the trailer lights. Attach a line to the nose of the boat. Back the trailer into the water until the boat floats free. Do not untie the nose of the boat from the trailer winch until the boat is in the water. On a reasonably steep ramp, the boat could slide off the trailer before it gets near the water. If you leave the car for any reason, make sure the brake is set, or the whole works may end up under water.

After the boat is launched, go inside and look to make sure there are no leaks. If you raise the mast after the boat is in the water, first fill the water ballast tank to give yourself a more stable platform.

13. THE WATER BALLAST SYSTEM: FILLING AND EMPTYING THE BALLAST TANK

WATER VALVE AND AIR VENT:

Just below the cabin access ladder, there is a small access door that contains the water tank valve and air vent. (Photo 22)



Photo 22. Water Valve and air vent.

The entire assembly is shown on the cross section drawings on the following page.

FILLING THE TANK:

To fill the tank, open the air vent by removing the lever plug (A). Then turn the wing nut (B) counterclockwise until it touches the cotter pin (C) at the upper end of the valve shaft. (Do not remove the cotter pin. If it is off the shaft, and if you turn the wing nut too far, the valve may fall out of the bottom of the boat.) Push the valve downward as far as it will go. This moves plate (D) and seal (E) away from the hull, allowing water to flow thru the water access holes (G) into the tank.

CHECKING THE LEVEL OF THE TANK:

When the tank is full, with the boat level, the water level is approximately 3" below the vent hole. It takes about 6 minutes to fill. Stick your finger in the vent hole. If you feel water, the tank is full. If you can't feel water don't sail the boat.

WARNING:

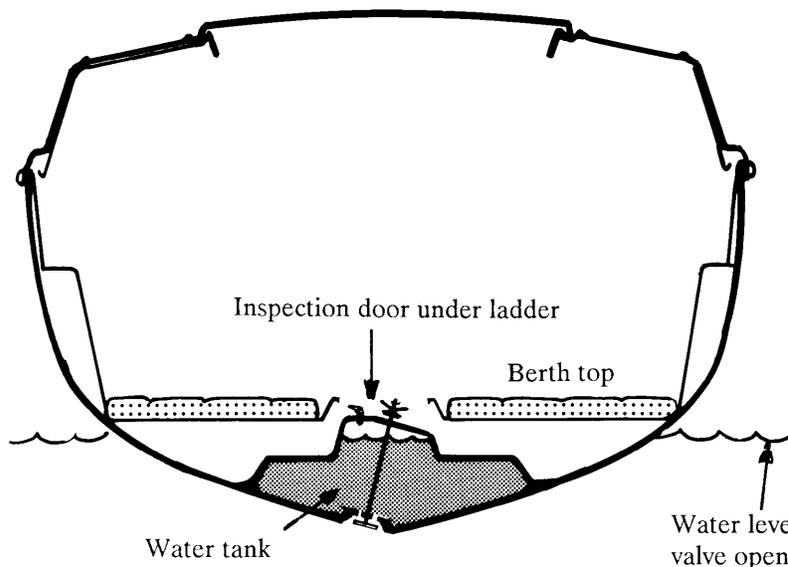
The tank must be full before sailing the boat. Without a completely full tank the boat will not be self-righting.

CLOSING THE WATER VALVE AND AIR VENT:

Reinstall the lever plug in the vent hole. Make sure it is tight, or the water ballast will spill into the boat when the boat leans over. There is an adjustment nut at the bottom of the lever plug. If the plug is too loose, hold the metal parts at the top and turn the rubber. The rubber portion of the plug will become fatter or skinnier as the rubber is rotated. Adjust it so that it must be forced into the hole. Then, when the lever is pressed to the horizontal position, it will really grip the hole and stay put.

To close the valve, turn the wingnut (B) clockwise until it is tight. Get it as tight as you can with your fingers. It is not

WATER BALLAST SYSTEM



Water level outside of the boat. With the valve open, the level in the tank will seek the same level as the level of the water surrounding the boat.

(B) Wing nut. Turn clockwise to close valve. Turn counterclockwise to open valve.

(H) Dome shaped stainless steel washer. Mounted with the hollow side down.

(C) Cotter pin to keep the valve from falling out of the bottom of the boat. Do not remove.

(A) Lever action air vent plug. Install tight when tank is full.

(I) Rubber washer, 1/2" thick. 1 1/2" diameter.

Turning the wingnut clockwise draws the valve shaft and stainless steel plate up, which squeezes the rubber washer against the hull, closing off the water access holes. This also presses the top rubber washer against the top of the tank, sealing off the hole in the top of the tank through which the valve shaft passes.

Air vent plug removed

(G) Water access holes in hull, exposed when valve is open.

(F) Valve shaft

Water level when tank is full

3/8" nut

(E) 1/4" thick rubber washer, 3" diameter

Threaded pin welded to plate to keep valve from rotating.

3" long tube. Holds rubber washer down against plate.

(D) Stainless steel disc welded to end of valve shaft. Must fit parallel to hull.

VALVE OPEN

VALVE CLOSED

necessary to use tools. As you tighten the wingnut, the valve shaft (F), plate (D) and seal (E) are pulled up tight against the hull, sealing off the water access holes (G) and trapping the water in the ballast tank. As the wing nut is tightened, the cone shaped washer (H) and rubber seal (I) are pressed tight against the top of the water tank, sealing the top.

CHECK TO MAKE SURE THE VALVE AND VENT ARE SEALED:

If the wingnut is loose, ballast water can come into the boat around the valve shaft, and it can leak out of the bottom of the hull if the boat leans over. If this happens, ballast is lost and the boat may no longer be self righting.

While you are sailing and the boat is tipped, check the valve and air vent to make sure there are no leaks. The more the boat leans over, the more pressure will be on the valve and vent, making a leak more likely. Watch them closely.

It is possible to test the watertightness of the lower part of the valve and its seal by pulling the boat out of the water with the tank full and valve closed. Check to see if it leaks. Do this frequently. Preferably every time you sail the boat.

Avoid opening the valve or vent hole in choppy water or when the boat is leaning, because the water can surge around in the tank and spill out into the boat. This could flood the boat. The only time the valve and vent hole should be open is when you are emptying or filling the tank, or when the boat is out of the water. Do not leave the valve and vent hole open and unattended.

14. PREVENTION OF ALGAE IN THE BALLAST TANK

If you leave the ballast tank full of water for long periods, drop in a few swimming pool chlorine tablets to prevent a bad case of algae. Be cautious when handling the chlorine tablets. Follow the directions on the chlorine tablet container very carefully. Don't put chlorine in the galley water tank. Don't leave water in the tank in freezing weather. Damage could result.

15. RETURNING THE BOAT TO ITS TRAILER

Simply drive the boat onto its trailer. Try to steer the nose into the V on the front of the trailer. Leave the outboard running to hold the boat against the rubber V pad, and go forward to secure the nose to the trailer.

Before pulling the boat out of the water, winch the nose securely to the trailer to prevent the boat from sliding backward off of the trailer. Make sure the boat is centered on the trailer.

16. EMPTYING THE BALLAST TANK

Open the valve by turning the wingnut (B) counter clock-wise. Remove the vent hole plug. Pull the boat slowly out of the water, and the water ballast will begin to drain out of the boat and back into the ocean. As the boat comes out of the water, the water level in the tank will be higher than the water level surrounding the boat. The water in the tank will try to seek the level of the surrounding water, and the tank will drain.

If the ramp is steep, and the valve and air vent are open, the nose of the boat may be higher than the holes in the top of the tank, and some water may spill into the boat from inside the tank. This can be remedied by pulling the boat out slowly, or by keeping the valve and air vent closed until the boat and trailer reach level ground at the top of the ramp. If the ramp is steep or slippery, or if your car is feeble, it may not be able to pull the boat and the 1200 lbs of water up the ramp. If so, move forward just a small amount and wait for some water to drain. Then move forward some more, and let more water drain. Keep inching forward until the water is gone. In this manner, you will never have to pull out the entire 1200 lbs in one swoop.

Do not try to tow the boat with water in the tank. The trailer was not designed to carry the extra 1200 lb load.

Trailer with the water ballast in the tank will overload the trailer and probably your car. When trailering, leave the valve open so all the water can slosh out. There is no sense in carrying around more water than you have to.

17. CONNECT THE BOOM TO THE MAST

The finished assembly is shown below. (Photo 23)



Photo 23 Connect boom to mast

18. REAR (MAIN) SAIL

The 38' mainsail control line is installed as shown in Photo 24

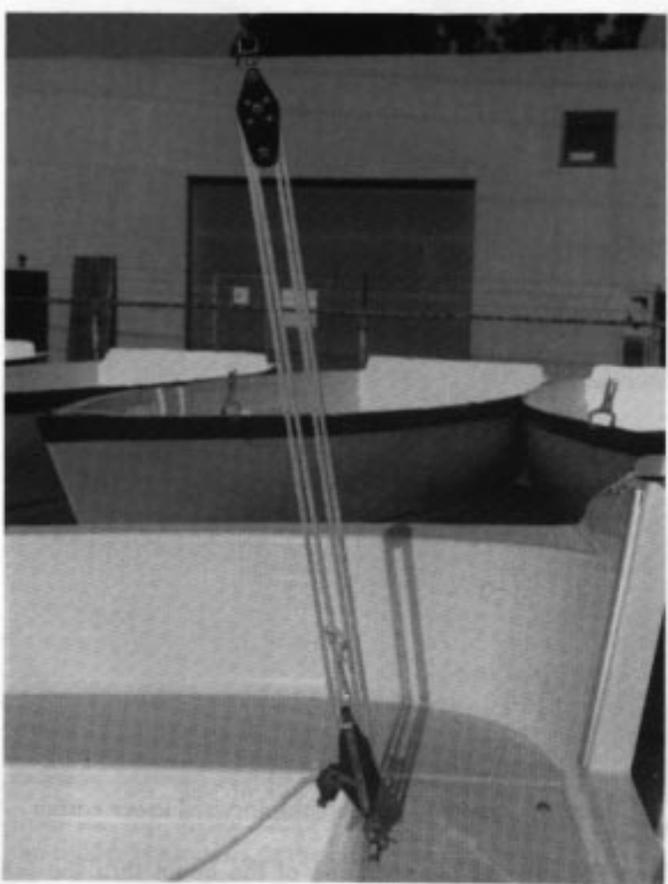


Photo 24 Mainsail control line

To hoist the mainsail, first slide the bottom edge of the sail into the boom as shown in Photo 25.

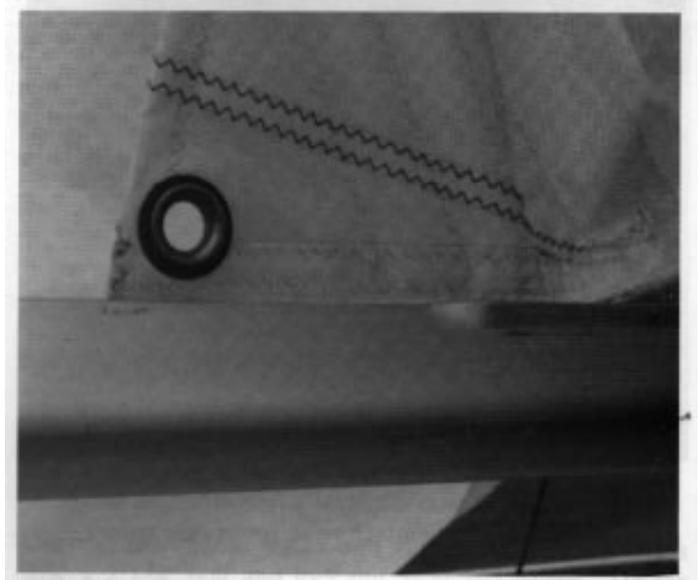


Photo 25 Attaching the mainsail to the boom

Pass the 1 1/2" pin through the boom and through the small ring in the forward lower corner of the sail (Photo 26)

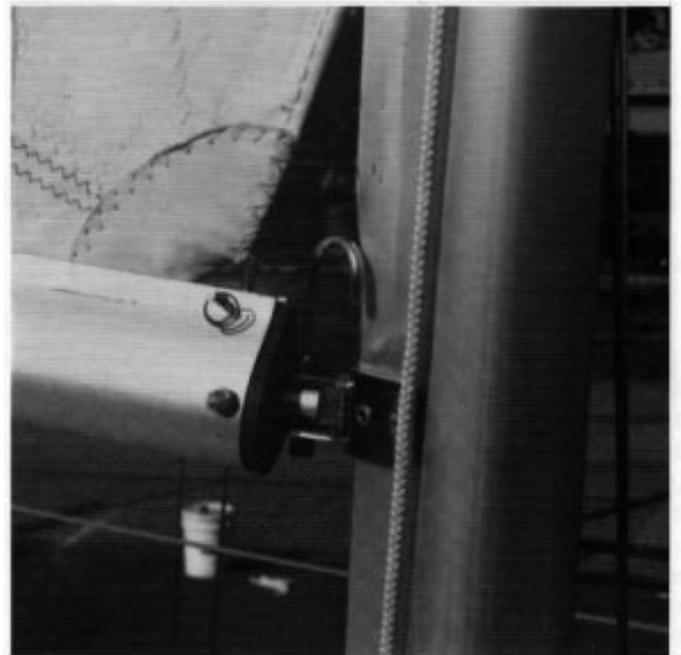
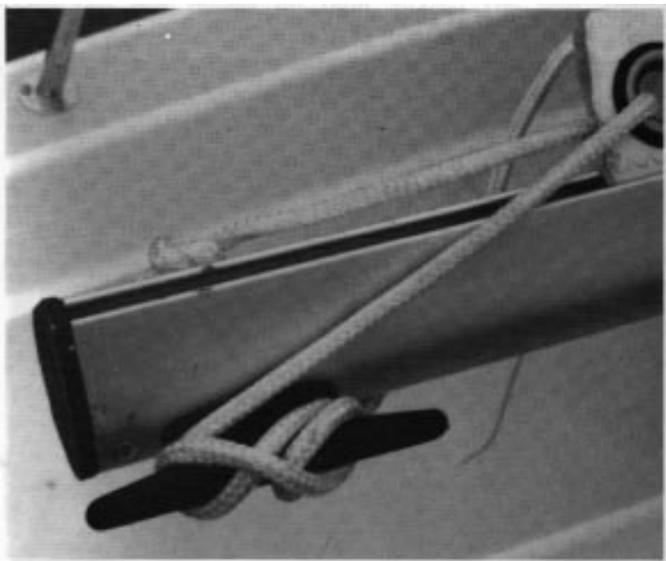


Photo 26 Mainsail attachment, forward lower corner

Run the rope at the rear end of the boom thru the sail and tie the line tight to the cleat at the end of the boom, as shown in Photo 27.



.Photo 27 Mainsail attachment, lower rear corner

Connect the hoisting rope U shackle to the top of the sail, and feed the rope on the leading edge of the sail into the spread portion of the mast (Photo 28).



Photo 28 Attaching the mainsail to the mast

Insert the 3 fiberglass battens in the pockets in the rear edge of the sail as shown in Photos 29 and 30.



Photo 29 Batten, partially inserted

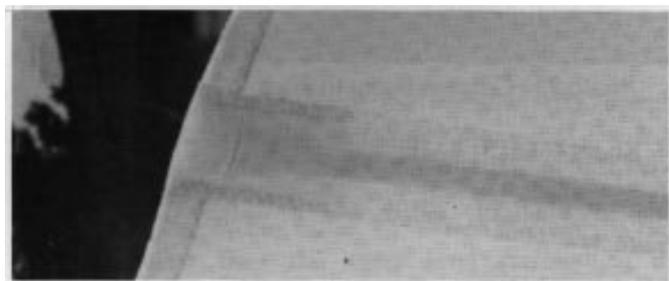


Photo 30 Batten, fully inserted

With the boat pointed directly into the wind, hoist the sail.

For light winds, the sail should be full and somewhat baggy along the boom. As the wind increases, the sail can be flattened for better efficiency by tightening the hoisting and boom end ropes. A common error is not having the hoisting rope tight enough. However, don't get it so tight that the sail has long vertical wrinkles along the mast.

19. FORWARD (JIB) SAIL

Attach the forward corner of the jib to the rear hole in the foredeck fitting, clip the jib to the forward mast support wire, and tie the jib control line as shown (Photos 31 and 32).



Photo 31 Jib sail, forward lower corner

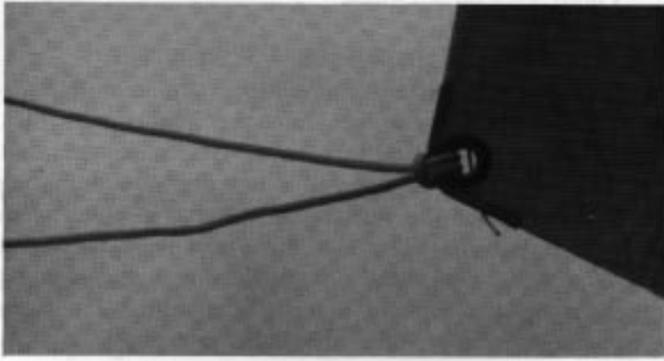


Photo 32 Jib sail, control line attachment

When the jib is raised, get the hoisting line really tight. When sailing, there should be no scallops or sagging between the clips on the jib sail. A loose leading edge is the most common error and generally harmful to the boat's windward performance.

20. REDUCING THE AREA OF THE MAINSAIL (REEFING!)

Don't hesitate to reef when it blows hard. The boat will be more manageable and usually faster. To reef, release the mainsail hoisting line and lower the sail until the reefing eye on the front edge of the sail (about as high on the sail as the first batten) can be hooked into the hook that holds the boom to the mast. Then retighten the hoisting line.

Release the rope that holds the rear end of the sail to the boom. Pass the line through the reefing eye on the sail (near the bottom batten), around the boom, back through the reefing eye, then to the cleat at the end of the boom (Photo 33)

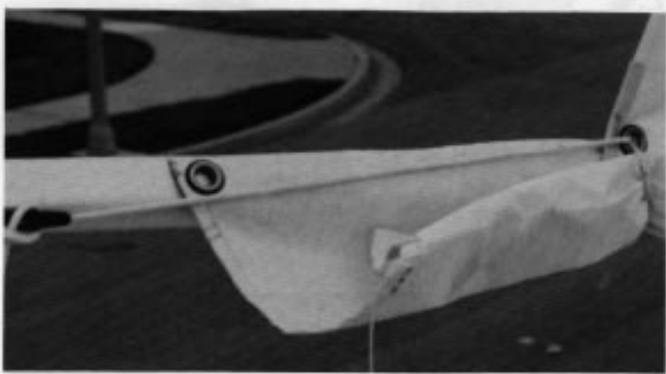


Photo 33 Reefed mainsail, lower rear corner

21. RUDDER

MOUNTING THE RUDDER:

When you first receive the boat, you will find the rudder blade inside the boat. Bolt it in place as shown in the following photo, using a 3/8" x 2 1/2" hex bolt and lock nut. The bolt should be just tight enough to allow the blade to be pulled up and down without binding. Be sure the pivot bolt

is in the bottom hole in the stainless steel bracket, and in the 3/8" hole that is 3 3/8" down from the top of the rudder blade. The sharper edge of the rudder blade goes to the rear.

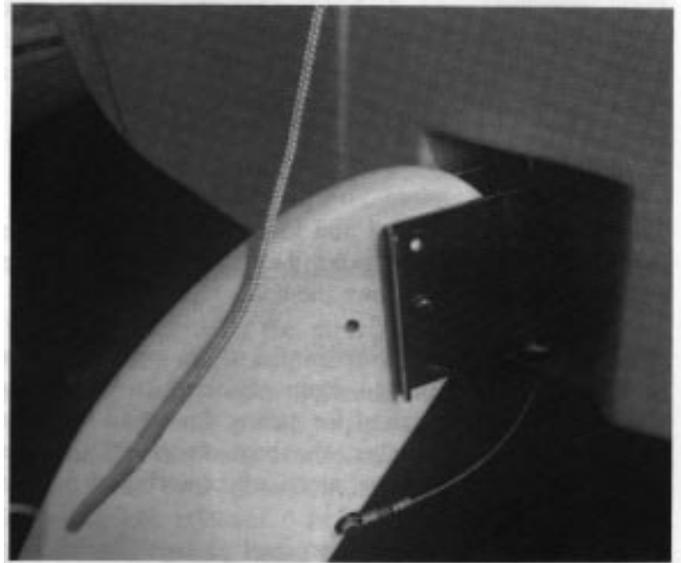


Photo 34 Rudder attachment

Connect the rudder hold down wire to the rudder with a 3/8" x 2 1/4" bolt and lock nut as shown below. Tie the 7' retracting rope to the rudder as shown.

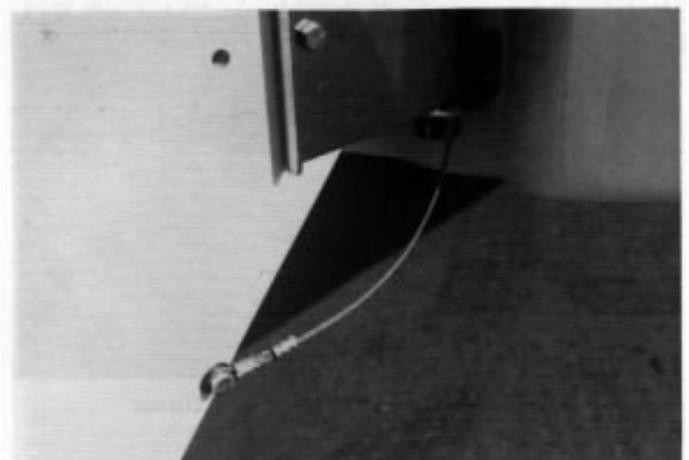


Photo 35, Rudder hold down wire attachment

It is not necessary to remove the rudder blade when launching or trailering. Put it in the up position and tie it securely. Also tie the tiller to the mast crutch to keep the rudder from swinging when trailering. It is also a good idea to put a red flag on the end of the rudder blade so that no one hits it.

KICK UP RUDDER SYSTEM:

The kick up rudder blade can be secured in any position. When sailing, make sure that the blade is tied all the way down. If it angles back, the loads on the tiller will increase substantially. If the boat is left in the water, you may want to lock the rudder down with a 3/8" x 2 1/2" bolt and lock nut. Be careful, however, it won't kick up and may be damaged

if it hits something. The blade can be bolted in the up position for trailering.

22. CENTERBOARD

The centerboard is raised and lowered by pulling on the line coming out of the galley face. Tie a knot in the line so you won't lose it down the hole.

The centerboard should be in the down position when sailing into the wind, to keep the boat from sliding sideways. It can be raised for sailing downwind in order to reduce drag. However, the boat steers a lot better when there is a foot or more of centerboard in the water.

When sailing across the wind, leave the board about half way down. This will move the center of the boat's resistance to the rear and reduce load on the rudder.

23. SECURING THE POP TOP

POP TOP LOCKS:

For trailering, securing the boat against theft, and for heavy weather, there are 2 locking devices to hold the pop top firmly to the deck. One of the locks is shown Photo 36.



Photo 36 Pop top locks.

SECURING HATCHES IN HEAVY WEATHER:

In windy conditions, make sure all locks are screwed down tight, so no water can get into the boat if the boat leans over or gets buried in a wave. Also make sure that the foredeck hatch is clamped down tight. It is also a good idea to have the vertical cabin hatch in place when sailing gets rough. The last thing you need is a boat full of water. Periodically check the foam seals around the pop top and forward hatch. When the hatches are clamped tight, these hatches should be waterproof.

SECURING THE POP TOP IN THE RAISED Position

Photo 37 shows the pop top in the up position. It is held up and against the mast by a lock that slides in the mast's sail feed track. Make sure that the thumb screw goes thru the

hole in the front face of the pop top, and presses tight against the mast.

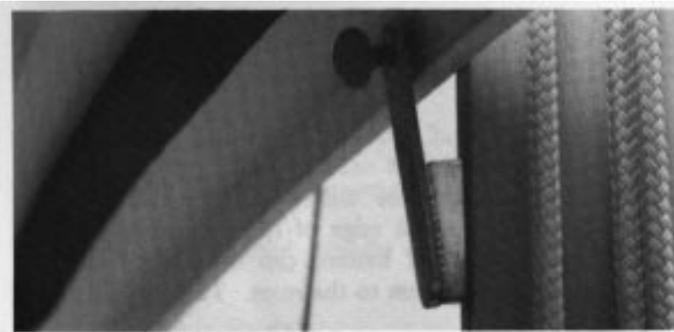


Photo 37 Securing the pop top in the up position

Make sure this lock is holding the pop top firmly, or a gust of wind or a lurch of the boat may drop the pop top on someone's head.

24. POP TOP COVER

The optional pop top cover is tied over the pop top as shown below.



Photo 38 Pop top cover

25. SAFETY RAILS

Make sure the safety rail posts and forward safety rails are secured with their set screws and cannot pull out. The set screws should be screwed in to where the heads ate up against the socket. The lifelines connect as shown in Photos 39, 40 and 41.



Photo 39 Side safety rail posts

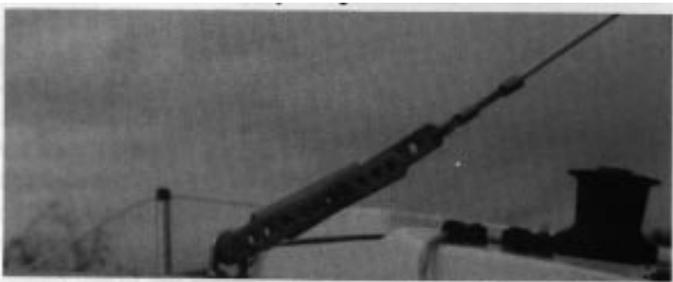


Photo 40 Rear safety rail connection

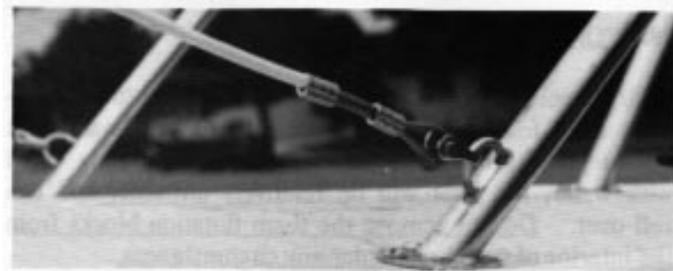


Photo 41 Forward safety rail connection

26. BOOM VANG

The vang is used to take the twist out of the mainsail and is very important for good performance. The hardware is just like the mainsheet, and attaches to the mast and boom as shown in the following photo.

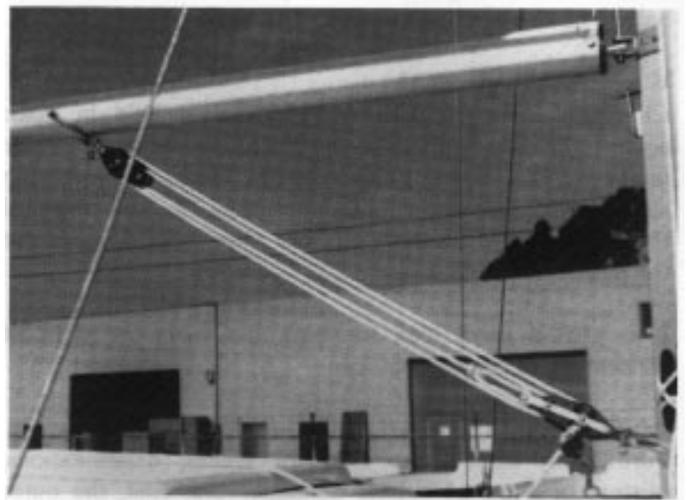


Photo 42. Boom vang

27. SELF-RIGHTING CHARACTERISTICS

With sails rigged to the mast and boom, water ballast tank full, and the masthead pulled to the level of the water, the boat, when released, should return to an upright position. With virtually any sailboat, it is possible for the belly of the sails to trap enough water to hold the boat down on its side if the sail control lines are not released. In the event of a knockdown, release all control lines to prevent this possibility. In relatively calm sea conditions, water will not enter the cabin hatch in the event of a knockdown. In rough seas, however, it is possible for waves to enter the cabin through hatches if the boat is held on its side. While sailing in rough weather, it is advisable to keep all hatches closed and secured. Do not sail with the pop top up except in the lightest wind conditions.

28. FOAM FLOTATION

With the normal gear and crew, the MacGregor 26 has sufficient solid foam flotation blocks to keep the boat afloat in the event the cabin fills. When completely filled with water, the boat will be relatively unstable, and can roll over. Do not remove the foam flotation blocks from the interior of your boat under any circumstances.

29. BOAT MAINTENANCE

LEAKS:

Even though the MacGregor 26 has no under water thru hull fittings, other than the water access system for the ballast tank, it is a good idea to check the cockpit, outboard well and galley drains to make sure all connections are tight and waterproof. Check the water ballast valve for leakage as described earlier.

WATER VALVE SEAL:

Check to make sure the rubber seal is held in place against the metal plate at the bottom end of the water intake valve. If the rubber comes loose, the incoming water could suck the rubber up against the hull and seal the water intake holes. It will then take forever for the tank to fill.

It is also a good idea to check the valve for signs of electrolysis or corrosion.

INSPECTING THE HULL AND DECK:

Periodically inspect the boat for cracks, delaminations, blisters or signs of impact damage. Gel coat, the outer cosmetic finish, is fairly brittle and occasionally cracks and crazes where it is stressed. This is normally cosmetic only. If crazing appears, check to see if the fiberglass itself, and not just the colored gel coat, is damaged.

INSPECTING MAST SUPPORT WIRES:

The mast support wires should be checked frequently to make sure there are no broken strands. If you find a broken strand, replace the wire immediately.

INSPECTING HARDWARE:

Also check all bolted on hardware to make sure everything is tight and leak proof. Squirt the boat with a hose and look for leaks. If one is found, make sure the bolts are tight and all joints are sealed.

EXTERIOR FINISH:

The fiberglass finish should be protected in the same manner as an automobile finish. An occasional polishing and waxing (with any good quality automotive polish and

wax) will keep the surface in excellent condition. If the boat is left in the water (either fresh or salt water), apply a good coat of anti-fouling bottom paint. Without good bottom paint, the white gel coat exterior surface may blister.

30. REMOVING THE CENTERBOARD

Lift the boat off its trailer and set it on strong supports about 3' off the ground. With a screwdriver, pop out the white plugs just aft of the centerboard fitting on the bottom of the hull. This allows access to a molded in air pocket where you can get at the centerboard nut. (Don't panic when you see the

plug. It isn't the only thing keeping water out of the hull. The real hull is about 2" above the false hull bottom where the centerboard is attached.) Bend an end wrench to reach up and hold the nut, and remove the bolts. The centerboard and its hanger assembly can then be lowered out of the boat. Be careful not to drop it on yourself.

Remember to release the centerboard rope, or the board will not come down.

31. TRAILER MAINTENANCE

GENERAL:

A good periodic inspection and clean up can add years to the trailer's life.

All of the maintenance and operation procedures mentioned are very important as there are no warranties of any kind on brake systems for boat trailers.

BRAKE ADJUSTMENT: To adjust the brakes, go through the following steps:

A. Jack up and support the trailer with the wheels mounted, brake drums cool, and the actuator in the towing position.

B. Compress the **actuator mechanism several times** to center the shoes in the brake drum, then return the actuator to the fully extended towing position.

C. On the inside or back side of the brake backing plate, you will find a rubber or spring steel plug. Under this plug there is a brake shoe adjusting slot. With a brake adjusting tool, similar to the kind used on cars, adjust the brake until a heavy drag can be felt when you turn the wheel and tire. Then back off the adjustment until the wheel just turns freely. Repeat the above steps on each brake drum. Adjust the brake linings after the first 1000 miles and every 2000 miles thereafter. It is best to adjust them at the beginning of each season. Replace brake linings when they become worn.

BLEEDING THE BRAKE SYSTEM:

Fill the system with SAE 70 R1 or 70 R3 heavy duty brake fluid. Install a rubber hose on the wheel cylinder bleeder valve. Have the loose end of the hose submerged in a glass container of brake fluid to observe bubbling. By loosening the bleeder screw on the wheel cylinder one turn, the system is open to the atmosphere. Pump the actuator with long steady strokes. The bleeding operation is complete when the bubbling stops. Be sure to close the bleeder screw securely. Repeat the bleeding operation at each wheel cylinder. During the bleeding process, replenish the brake fluid, so the fluid level does not fall below 1/2 full in the master cylinder reservoir. After bleeding is completed, refill the master cylinder and securely install the filler cap. Replace cloudy, dirty or watery brake fluid.

AXLE MAINTENANCE:

Buy a small grease gun for the hubs and use a high quality multi- purpose non-fibrous grease, similar to the grease used in automobile wheel bearings. Put in enough grease to move the spring loaded piston about 1/8" outward from its seated position. Check the lubricant level in the hub by pressing the edge of the spring loaded piston. If you can move or rock the piston, the hub has sufficient grease. If it cannot be moved, add grease with the grease gun. Do not overfill.

TRAILER LIGHT CARE:

The lights are equipped with quick disconnect electrical plugs. All lights should be removed before backing the trailer into the water. Put a dab of petroleum jelly (Vaseline) on each of the quick disconnects. Be sure to disconnect the trailer harness from the trunk harness of the towing vehicle before backing the trailer into the water.

TRAILER PAINT MAINTENANCE:

To keep rust to a minimum, rinse the trailer with fresh water after every exposure to salt water.

GENERAL MAINTENANCE:

Frequently check the trailer to assure that all bolts and nuts are tight, that all welds look solid, and that there are no cracks or bends in the trailer structure. Inspect tires for cuts, bad bruises and worn tread. Replace tires as necessary.

32. ** LIMITED WARRANTY ******

MacGregor Yacht Corp. makes the following warranty to purchasers:

SAILBOATS AND SAILBOAT PARTS AND EQUIPMENT:

For a period of two years from the date of sale to the first use purchaser, MacGregor Yacht Corp. will, through its selling dealers, repair or replace any sailboat part or sailboat equipment manufactured by MacGregor which is proven to MacGregor's satisfaction to be defective by reason of faulty workmanship or material.

TRAILERS AND TRAILER PARTS AND EQUIPMENT:

For a period of six months from the date of sale to the first use purchaser, MacGregor Yacht Corp. will, through its selling dealers, repair or replace any trailer part or trailer equipment manufactured by MacGregor which is proven to MacGregor's satisfaction to be defective by reason of faulty workmanship or material.

The above warranties will be in effect only if such part is promptly returned to the dealer with a sum sufficient to pay transportation charges to the MacGregor plant.

This warranty shall not apply to:

(1) All items determined by MacGregor to be the responsibility of the dealer in launching or otherwise handling or preparing a new boat or vessel.

(2) All items installed by the dealer or anyone else other than MacGregor.

(3) Any failure resulting from lack of maintenance, normal wear and tear, negligent operations or maintenance. Negligent operation includes, but is not limited to, failure to properly and completely fill the water ballast tank when sailing, failure to empty the water ballast tank before trailering, failure to heed adverse weather warnings, and failure to use care when operating the boat near sources of electrical power.

(4) All accessories or equipment not manufactured by MacGregor. Any warranty furnished by the manufacturer, if possible, will be passed on to the boat owner.

(5) Trailer brake systems and trailer lighting systems.

(6) Exterior paint and gel coat finishes. Although we use the finest finishes available in the industry, they cannot be warranted because they are affected by climate and use conditions beyond the control of MacGregor Yacht Corp.

(7) Any other person than the first use purchaser of the boat.

(8) Any boat or part manufactured by MacGregor which shall have been altered in any way so as to impair its original characteristics.

The foregoing warranties are made in lieu of all other warranties, obligations, liabilities, or representation on the part of MacGregor, and the purchaser waives all other warranties, guaranties, or liabilities, expressed or implied, arising by law or otherwise, including without limitations any liability of MacGregor for consequential damages.

The purchaser should understand that the dealer is not an agent of MacGregor Yacht Corp. and MacGregor does not authorize the dealer or any other person to assume for MacGregor Yacht Corp. any liability in connection with such warranty or any liability or expense incurred in the replacement or repair of its products other than those expressly authorized herein.

MacGregor reserves the right to improve its products through changes in design or material without being obligated to incorporate such changes in products of prior manufacture.

DEALER'S RESPONSIBILITY

The processing of claims against the transportation company for any damage occurring during shipment, or by deliberate act of vandalism or by normal intransit hazards shall be the dealer's responsibility. MacGregor Yacht Corporation's responsibility for safety against damage to the boat ceases at the time the boat leaves the MacGregor Yacht Corp. facility, thereafter responsibility is either that of the common carrier or the dealer.

It is further the responsibility of the dealer to furnish guidance and information to the purchaser on matters pertaining to service and maintenance during the warranty period, and in addition to process any claims under the warranty to MacGregor Yacht Corp. The dealer is responsible for making sure that the owner receives the Owner's Instructions and understands all information contained therein.

OWNER'S RESPONSIBILITY

Purchasers are to take the following steps in pursuing a warranty claim:

(1) Fill out and return, within ten days after the delivery, the attached Warranty Registration Card.

(2) The Owner's Instructions, as well as instructions furnished with any accessories installed on the boat, shall be placed in a large envelope and remain aboard the boat. Purchasers should make special effort to make sure that this literature is delivered to them by the dealer or MacGregor Yacht Corporation. Careful attention to these instructions will add many years to the life of the boat and equipment.

(3) It is understood that all matters of service are handled with the selling dealer. Purchaser should notify his selling dealer regarding any problems under the warranty.

(4) The dealer shall be given an opportunity to supply parts needed for all repairs for which a claim is to be made.

(5) The purchaser agrees to use the boat in a reasonable and safe manner. It is necessary for the owner or operator to use extreme caution when operating the boat in severe weather, when operating the boat, trailering, or raising and lowering the mast near power lines or sources of electrical power (contact between a power line and the mast or rigging could cause injury or death), and when preparing the boat for trailering.

(6) The purchaser must use care to assure that the boat is not sailed unless the ballast tank is completely full and the valve is closed and sealed.

(7) The purchaser must familiarize himself with all information contained in the Owner's Instructions, particularly the warnings contained in pages 1 and 2.