SPECIAL SAFETY WARNINGS

NEVER POWER THE BOAT OVER 5 MILES PER HOUR WITH THE CENTERBOARD DOWN.

At high speed, the centerboard creates lots of sideways lift and can cause the boat to be very unstable. It can roll the boat severely or possibly cause a capsize. Pull it all the way up into the boat and secure it well. It is extremely important to check the cable frequently while powering to be sure the board has not come loose and lowered itself. This is particularly important when the boat is pounding into waves and things tend to get jiggled loose. We have provided both an easily operated cam cleat for controlling the board under sail, and a wrap around type cleat to positively secure the line to hold the board up while powering. Use both the cleats when powering. The lifting cable has a stop on it to keep the board from going too far forward. Do not change this adjustment. The further down and forward the board goes, the more you will risk severe rolling when the boat is under power. It is OK to leave the board down for low speeds (under 5 mph), where it will significantly enhance steering control.

IF YOU SAIL THE MACGREGOR 19 WITHOUT MAKING SURE THAT THE WATER BALLAST TANK IS COMPLETELY FULL, IT CAN TIP OVER.

Unless the water ballast tank is completely full, with 800 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.

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. 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 150 AND 200 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 OVERLOAD THE BOAT AND TRAILER. THE MAXIMUM WEIGHT IS SHOWN ON THE CERTIFICATION DECAL NEAR THE HITCH, ON THE LEFT (PORT) SIDE OF YOUR TRAILER.

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.

MAKE SURE THE WHEEL LUG NUTS ARE TIGHT BEFORE TRAILERING THE BOAT.
BEFORE TRAILERING THE BOAT, MAKE SURE THE NOSE OF THE BOAT IS TIED SECURELY TO THE TRAILER.

MAKE SURE THE OUTBOARD MOTOR AND MAST ARE ATTACHED FIRMLY TO THE BOAT WHEN THE BOAT IS BEING TRAILERED. DO NOT TRAILER THE BOAT WITH ANY WATER IN THE BALLAST TANK. THE 800 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.

DON'T STORE FUEL CANS INSIDE THE BOAT.

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

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.

DO NOT REMOVE ANY OF THE FOAM FLOTATION BLOCKS.

Loss of "n 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 ALLOW ANYONE TO
STAND WHERE THE MAST OR SUPPORT WIRES COULD FALL IF
SOMETHING, OR SOMEONE, LETS GO.
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.

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. Tie one knot in the end of the line to keep it in
the pulley. 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.

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.
EXCEPT WHEN FILLING OR EMPTYING THE WATER TANK, ALWAYS
OPERATE THE BOAT, UNDER SAIL OR POWER, WITH THE TRANSOM
VALVE AND VENT PLUG SECURELY CLOSED.

If the valve is open, even slightly, the forward motion of the boat can drain all of the
ballast water from the tank. If the vent is open, ballast can be lost when the boat leans
over under sail. You may think the tank is full, and that the boat is self righting, but you
may be unpleasantly surprised by an unexpected capsize.

NEVER POWER THE BOAT OVER 5 MILES PER HOUR WITH THE SAILS
UP.

The forward speed of the boat can create enough wind to capsize the boat if the sails are
up. The result could be instant capsize. If the water tank is empty, the boat will not be self
righting.
MAKE SURE THE WATER TANK ACCESS PORTS ARE SCREWED DOWN ABSOLUTELY TIGHT.

If they leak, the contents of the ballast tank will end up in the boat. If the transom valve is also open, the whole ocean will end up in the boat.

MAKE SURE THE WATER TANK VENT PLUG IS TIGHT IN THE HOLE. ALWAYS USE THE BRONZE SHEAR BOLT TO HOLD THE RUDDERS DOWN.

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. For those who are interested, there is a short glossary. 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 assembling 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. The bowline 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.
SECURING A LINE TO A CLEAT:

The proper way to secure a line to a cleat is shown in Photo 2. Make sure the last loop forms a half hitch (with the tail end of the line passing under the loop) in order for the line to stay secure.
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.

ATTACH SPREADER BRACKETS TO THE MAST SPLICE:

Using a 3/8 x 4" bolt and lock nut, attach the spreader brackets and lower side wires to the mast splice. Make sure there are 3 washers between the spreader bracket and the splice. (Photo 3) Tighten the nut tight but not so tight as to deform the splice. The straps that are attached to the U brackets should point about 10 degrees to the slotted side of the mast.

Photo 3: Spreader brackets and mast splice

JOIN THE MAST HALVES:

Slide the bottom and top halves of the mast over the splice as shown in Photo 4. The half round cut outs in the ends of the mast surround the washers underneath the spreader brackets. The downward pull of the mast support wires will keep the assembly together when the mast is raised.
Photo 4: Mast Assembly

MASTHEAD ASSEMBLY AND UPPER SIDE SUPPORT WIRES:

Slide the masthead assembly over the top of the mast and secure it in place with a 3/8” x 4” bolt as shown in Photo 5. The upper side wires (upper shrouds) also hang from this bolt. Make sure the bent strap attached to the upper side wires is at the top of the mast.

Photo 5: Masthead assembly
REAR MAST SUPPORT WIRE:

Install the rear mast support wire (backstay) to the longest arm of the masthead fitting (Photo 6). Note that the end without the stainless steel strap goes at the top of the mast. Use a 1/4" x 1 1/2" bolt and lock nut.

Photo 6: Rear mast support wire

FORWARD SUPPORT WIRE AND JIB HALYARD PULLEY:

The forward support wire (forestay) is attached to the front hole in the masthead fitting with a 1/4" x 2" bolt and locknut as shown in the Photo 7. Note that a pulley is mounted on the same bolt. This pulley is used for the rope that hoists the forward sail Gib halyard.

Photo 7: Forward support wire and jib pulley
SPREADER TUBES:

Connect the spreader tubes to the U shaped brackets as shown in Photo 8, 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 moderate amount of friction.

Photo 8: Spreader tube attachment

The end of the spreader tubes should be located as shown in Drawing 9. The measurement should be taken with the upper mast support wire pulled tight.

Drawing 9: Spreader tube ends: wire position
Connect the spreader tubes to upper mast support wires as shown in Photo 10. 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.

Photo 10: Spreader tube ends

MAINSAIL HOISTING ROPE (MAIN HALYARD):

The rope that hoists the rear sail (mainsail) passes through the pulley at the masthead (Photo 11) 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 11: Mainsail hoisting rope (main halyard)
JIB HOISTING ROPE: (JIB HALYARD):

The rope that hoists the forward sail Gib) 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 12).

Photo 12: Jib hoisting rope (jib halyard)

PREPARING THE BOAT FOR TRAILERING

CARRYING THE ASSEMBLED MAST ON TOP OF THE BOAT:

If you are sailing a lot, you may not wish to dismantle the mast to stow it below. You can carry it on top of the boat, completely assembled, with all wires and lines connected for easy raising and lowering

SPREADER TUBES:

The mast is carried on the boat with the bottom end forward and the slotted side down. Bolt the mast base to the forward rail with a 3/8 x 4" bolt and lock nut, as shown in Photo 13. This bolt also serves as the mast hinge. Use locknuts on all hardware holding the mast to the boat.
Photo 13: Mast bolted to front rail

Make sure the bolt is secure. 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 rear end of the mast bolts to the mast support post on the rear rail. Use a 3/8" x 4" bolt and lock nut. Make sure the post is secured in its socket with a 1/4 x 1 1/2" bolt and lock nut (Photo 14).
MAST AND BOOM STORAGE INSIDE THE BOAT:

If you wish to carry the mast inside the boat, undo the 3/8" x 4" bolt and remove the masthead fitting. Then pull the 2 mast sections apart. The top half of the mast goes in the upper set of holes in the hull liner (Put the splice end in the forward hole in the liner). The bottom half goes in the lower holes (with the splice end toward the front of the boat). The forward end of the boom lays in the trough below the mast sections, and the rear end goes in the hole in the rear bulkhead. (Photo 15)

Photo 15: Mast and boom storage

The thumb screws in the hull liner should be screwed into the corresponding holes in the mast sections to keep the masts from sliding out of their mount holes. Coll the mast support wires and stow them, along with the spreaders and splice, on the rear bunk. When using the boat as a powerboat, the easiest place to store the mast is fully rigged in the upright position. It has no real effect on performance under power, and it is out of the way. Having the mast rigged is a great safety feature. If the engine quits, it takes only a few seconds to get a sail up and to start sailing. This might save you from drifting onto shore or from some other danger or embarrassment. It also beats trying to step the mast in rough seas.

SECURE ALL GEAR:

Stow 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. Be sure to use some sealant so the bolts won't leak.
When the boat is on its trailer, don't load up the cockpit with gear and people unless the rear of the trailer is blocked up. The weight could cause the trailer and boat to tip backwards. Make sure the outboard motor and rudders are secured in the up position for trailering.

SECURING THE BOAT TO THE TRAILER:

Secure the trailer winch line to the nose of the boat as shown below.

![Photo 16 Trailer winch line](image)

While keeping tension on the line, winch the nose of the boat snugly into the rubber bow support. Make sure these connections are good. If the line 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.

PREPARING THE TRAILER:

LUG NUTS:

It is the owner's 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 warranty 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 150 and 200. 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 2250 pounds. The empty boat weighs 1250 pounds. The trailer weighs 380 pounds. All other gear cannot exceed 620 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.)
1 three lens gang light centered on the trailer rear.

You must have two 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.

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.

The surge brake 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.
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 or car.

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. Be extra careful just after ramp launching or recovery.

ATTACHING THE MAST SUPPORT WIRES TO THE BOAT

WIRE ADJUSTING CHANNELS:

Attach a wire adjuster channel to the bottom end of the upper and lower mast support wires, and to the rear mast support wire (Photo 17).

Photo 17 Wire adjusting channels
Use a 1/4" clevis pin and cotter ring, and mount them as shown in the Photo 18. 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 (chainplates) with 1/4' clevis pins and cotter rings. The upper and lower mast support wires attach as shown in Photo 18. Note that the open side of the adjuster channels face each other. The upper wire goes in the rear hole. The cotter rings should go toward the outside of the boat, so the sail control lines won't pull them off.

![Photo 18 Wire adjuster channel attachments](image)

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

**RAISING THE MAST**

**ATTACH THE MAST TO THE MAST HINGE:**

Unbolt the mast from the forward rail, and unbolt it from the rear support. The 3/8" x 4" bolt and lock nut that holds the mast to the forward rail for trailering also serve as the pivot pin for the hinged mast step. With the rear of the mast supported by the support in the cockpit, move the forward end on the mast back to the hinge area. Insert the hinge pin (see Photo 19) 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.
LIFTING THE MAST:

Make sure all mast support wires except the forward wire are connected to the mast and boat.
Make sure that the mast wires are not entangled on the boat or trailer, and then raise the mast (photo 20). 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, tie the jib hoisting line (Gib halyard) to the bow rail to keep the mast from falling backwards while you connect the forward support wire to the deck fitting. Make sure both ends of the line are secured to keep the mast from failing backwards. Connect the forward mast support wire turnbuckle to one of the holes 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 power line.

RAISING THE MAST WITH THE OPTIONAL SYSTEM

GENERAL:

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

SIDE SUPPORT LINES:

After the mast pivot pin is in place, with top end of the mast resting in the mast crutch in the cockpit, connect the 12' side support lines as shown in Photo 22.
Using a bowline knot, fasten 12 foot side support ropes through the black plastic eyes on the deck just forward of the mast. Attach the other ends to the halyard cleats on each side of the mast (about 5' above the base of the mast). See Photo 2 "Securing a line to a cleat". Be sure they are secure. If they come loose, the mast will fall sideways as it goes up.

**MAST RAISING POLE**

Connect the end of the mast raising pole to the mast as shown below. Use a 3/8" x 4" bolt and lock nut.
Rig the block and tackle to the end of the pole as shown in the following photo.

![Photo 24 Mast raising block and tackle](image)

Tie the end of the jib halyard to the eye on top of the pole. Use a bowline knot as shown in Photo 1. Pull on the other end of the jib halyard until the pole end is about 10 degrees to the rear of vertical. Then tie off the other end of the halyard to one of the cleats on the mast, (located about 5' above the mast hinge). Use the wrap shown in Photo 2. 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 and pull on it to raise the mast. If there is an optional jib winch on the boat, take 3 wraps clockwise around the jib winch on the port side (the left side when facing forward), insert the winch handle securely in the winch and begin cranking up the mast. Keep pulling on the end of the line to keep it from slipping on the winch. The loads will be heavier 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 section describing how to raise the mast manually still apply to raising the mast with the optional pole. 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 fasten the line securely to the jib cam cleat at the rear of the cabin top.

Now connect the bottom end of the forestay turnbuckle to a 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 coffer 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).

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 mast support in its holder in the cockpit. Otherwise the mast will come down on the cabin hatch and cause damage. 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 vertical.

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.

ADJUSTING THE MAST SUPPORT WIRES

MAST POSITION:

The mast should lean about 4 degrees to the rear of the boat. This should be measured with the boat in the water, the water ballast tank empty, no one aboard, and the weight of a 40 hp outboard on the transom. If you tie a weight to the aft side of the mainsail hoisting line and let it hang from the top of the mast, the weight should touch the deck about 20" to the rear of the back face of the mast. This will give about 4 degrees. Make sure the water is calm and there is very little wind before making this measurement. 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.

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. 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 accidently 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:**

The downwind wires will be slack when sailing hard. The rear support wire may 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 damaged wire.

**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. 
The outboard motor and rudders should be put in the down position just before launching. 
Make sure the rudders are fastened down with the bronze 1/4" x 3" bolts and nuts. (Photo 
25) These bolts are shear pins. If the bronze bolts are lost or broken, a hardwood dowel 
will serve as well

![Photo 25 Rudder shear bolts](image)

If the rudder strikes an object while underway, the pins will fail and the rudder will kick 
up. This prevents damage to the rudder assembly. Lower and pin the rudders just before 
the boat is launched. It is tough to do this job when the boat is in the water. If the rudders 
are not pinned in the down position you will not be able to steer, except with the engine. 
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.

THE WATER BALLAST SYSTEM
FILLING AND EMPTYING THE BALLAST TANK

WATER VALVE AND AIR VENT:

Just below the cabin entry, there is a small access port that contains the water tank air 
vent (Photo 26).
FILLING THE TANK:

To fill the tank, open the air vent by removing the lever plug shown in the above photo. Then pull up the handle on the gate valve on the rear (transom) of the boat. The water tank will be full in about 4 minutes.

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 4 minutes to fill. Stick your finger in the vent hole. If you feel water, the tank is full. If you can't feel water, the boat will not be self righting. There is a 16" plastic tube in the rig box. Stick this in the vent hole, push it to the bottom of the boat and put you finger over the top end of the tube. Keep the tube top sealed tight and lift out the tube. When the tank is less than full, use the water level in the tube to determine the amount of water in the tank.

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.

Close the transom gate valve by pushing down on the handle. Make sure the valve is closed tight, otherwise water will be sucked out by the forward motion of the boat and all ballast will be lost, making the boat capsizable.
MAKE SURE THE VALVE AND VENT ARE SEALED:

While you are sailing and the boat is tipped, check the air vent to make sure there are no leaks. The more the boat leans over, the more pressure will be on the vent, making a leak more likely. Watch it closely.
It is possible to test the watertightness of the transom gate valve 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 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. 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.

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.

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 to the trailer to prevent the boat from sliding backward off of the trailer. Make sure the boat is centered on the trailer.
If you pull the boat out of the water and find that the nose of the boat is not quite in its rubber pad, drive the car and trailer forward at low speed and tap the brakes. The boat will easily slide into the rubber block. This saves having to overload the winch and line to move the boat. Don't go too fast or make a real hard stop, or the boat may end up in or on your car. Carefully store and secure all lines and mast support wires to avoid entanglement in the trailer wheels while towing.

EMPTYING THE BALLAST TANK

This section describes emptying the tank when the boat is being pulled out of the water at a launch ramp. Emptying the tank when the boat is still in the water is described near the end of these instructions in the Powering section.
Remove the water tank vent plug inside the boat. 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 air vent is open, the nose of the boat may be higher than the vent hole 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. This is the time to check the gate valve seal. If the ramp is steep or slippery, or if your car is feeble,
It may not be able to pull the boat and the 800 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 800 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 800 lb load. Trailering 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 unnecessary water.

CONNECT THE BOOM TO THE MAST

The finished assembly is shown below. (Photo 27)

REAR (MAIN) SAIL

The 38' mainsail control line is installed as shown in Photo 28.
Connect the hoisting rope U shackle to the top of the sail, and start feeding the rope on the leading edge of the sail into the spread portion of the mast (Photo 29).

Insert the 3 fiberglass battens in the pockets in the rear edge of the sail as shown in Photos 30 and 31.
With the boat pointed directly into the wind, hoist the sail while guiding the rope into the slot. The front lower corner of the sail attaches to the gooseneck hook at the forward end of the boom.
Secure the end of the hoisting line to the mast cleat on the right side of the mast (when looking forward) with a trucker's hitch, as shown below. First make a loop in the line about 2' above the cleat.

Wrap the loose end of the line around the cleat just once and then pass it thru the loop that you made above the cleat.
When you pull down on the loose end, you will get a 2 to 1 power advantage (For every pound of pull you put on the loose end, you will get a 2 pound pull on the halyard). When the mainsail is up, secure the loose end to the cleat as shown at the beginning of these instructions. The front edge of the sail should be stretched tight, but not so tight that vertical wrinkles appear in the front of the sail.

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 34.
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.

FORWARD (JIB) SAIL
Attach the forward corner of the jib to the hole in the foredeck fitting, using 2 shackles as shown in Photo 35.

![Photo 35 Jib sail, forward lower corner](image)

Clip the jib to the forward mast support wire with the bronze snaps on the sail, and tie the jib control line as shown (Photo 36).

![Photo 36 Jib sail, control line attachment](image)

When the jib is raised, use a trucker's hitch. Get the hoisting line really tight. Secure the hoisting line to the left (starboard) cleat on the mast.
When sailing, there should be no scallops or sagging between the clips on the jib sail. A loose leading edge is a very common error and hurts the boat's windward performance.

**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 thru the reefing eye on the sail (near the bottom batten), around the boom, back thru the reefing eye, then to the cleat at the end of the boom (Photo 37).

![Photo 37 Reefed mainsail, lower rear corner](image)

**CENTERBOARD**

The centerboard is raised and lowered by the line at the rear end of the front bunk. The centerboard should be fully lowered when sailing into the wind, to keep the boat from sliding sideways. It should be raised completely for sailing downwind. When sailing at right angles to 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.

When sailing with just the mainsail, the centerboard should be about 1/2 way down, or the boat will try to point into the wind and stop.

At low speed under power, the boat steers a lot better when the board is about 1/4 down. When powering over 5 mph, the board must be all the way up.

As a general guideline, when sailing on any angle to the wind, if the boat tries to turn up into the wind with the tiller centered, or you have to pull the tiller toward the direction from which the wind is coming In order to sail In a straight line, pull the board up a bit. If the boat tries to turn away from the wind, or you have to hold the tiller away from the direction of the wind, let the board down.
The following drawing shows the details of the centerboard control cable and bolts.

There are 2 round ports on the cabin floor. If these are removed, you can gain access to the inside of the water tank and the bolts that hold the centerboard and cable pulley. If you have leaky bolts, they can be loosened and resealed with 3M 5200 sealant. These bolts can be completely removed to take the centerboard out of the boat.

When you reinstall the access ports, they must be sealed with 3M 5200 sealant and refastened absolutely leak free, since they keep the water in the water tank.

**HATCHES**

**SECURING HATCHES IN HEAVY WEATHER:**

In windy conditions, make sure all hatches are secured, so no water can get into the boat if the boat leans over or gets buried in a wave. The last thing you need is a boat full of water. In calm weather, it is OK to remove the top hatch and stow it below. Simply remove the hinge pivot bolts and lift off the hatch. This gives easier access to the cabin, better headroom, easier sail handling and better visibility.
TABLE

The hatch over the left front bunk compartment serves as a table that clamps to the mast post. The table can be used at any height or position. Be sure you tighten the thumb screws securely, or your coffee may end up in your lap.

BOOM VANG

The optional 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.
SELF-RIGHTING CHARACTERISTICS

With sails rigged to the mast and boom, the 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 rough seas, 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.

FOAM FLOTATION

With the normal gear and crew, the MacGregor 19 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.

POWERING

The boat is designed for an outboard motor of no more than 40 horsepower. Do not use a larger engine.

With one person aboard, and the water tank empty, the boat will go about 25 miles per hour with a good, well tuned 40 hp outboard. You lose about 1 mph for every 100 lbs. that you add to the boat. With the water tank full, it will go about 15 to 17.

It is possible to drain the water tank while moving under power. You have to be going about 10 mph. Open the vent plug and open the gate valve on the transom. The nose of the boat will be high and will help the water to drain. The suction of the passing water will also help empty the tank. It takes about 4 to 5 minutes at 10 mph to empty it completely. With the nose high and in rough water, some water may spill out the vent hole while the tank is still full. Watch this carefully, or you may flood the boat.

When the tank is empty, immediately close the vent plug and the transom valve, or the tank will again fill with water. Always make sure the vent and valve are closed except for times when the tank is emptying or filling.

At dockside, a hose end siphon will empty the tank in about 12 minutes.

When powering at any speed over 6 mph, make sure the centerboard is all the way up. At high speed, with the board down, the board will create lifting forces to the right and left as the boat moves thru the water, making it very, very unstable. This could possibly cause capsize. Check frequently to make sure the board stays up during powering. Use both the cleats to secure the line. This is important. Re-read the first item on the "warnings" list at the beginning of these instructions.

Do not power at over 5 mph with the sails up. If you are going 20 miles per hour in calm air, and the boat is turned, it will slide sideways and you will now have a wind of 20 mph filling your sails. The result could be an instant capsize. The problem is made worse by the fact that your water tank will probably be empty while powering, making the boat more prone to capsize.

Make sure the mast support wires are tight when powering fast. The pounding and slamming can otherwise make your mast really rattle around.
You can relax the tension on the friction device on your outboard to let the motor turn from side to side freely when you are powering at higher speeds. With some engines, at high speed, when you turn the tiller, the motor will turn by itself to stay aligned with the rudders. Other engines seem to work better when you lock them securely in the centered position and steer just with the rudders. You can use the motor to steer, but the rudders work better, because the amount the motor can turn is limited. At real low speeds, especially in reverse, the steering with the motor and tiller give excellent control. At low speed, or when going in reverse, keep a good grip on the motor's tiller to keep the motor from turning itself.
The turning radius at high speed is relatively large, so allow yourself lots of room.
Many outboard motors have a kill switch that shuts off the engine if you fall out of the boat. This involves a cable that attaches to the switch and to you. It is an excellent safety feature, and should be used.

BOAT MAINTENANCE

LEAKS:

It is a good idea to check the watertank, cockpit, outboard well and galley vents and drains to make sure all connections are tight and waterproof. Check the water ballast valve for leakage as described earlier. Pull the boat out of the water frequently with the water tank full. If the centerboard and cable bolts are leaking, you will see water coming out of them. They will require resealing as described in the Centerboard section.

RUDDERS:

Inspect all rudder connections frequently. Make sure the rudder pivot bolts are pulled down tight enough to keep the rudders from flopping around in their housings, but loose enough that they can be raised and lowered without undue pressure.

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 with an epoxy undercoat. Without good bottom paint and epoxy primer, the white gel coat exterior surface may blister.

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:

(for trailers equipped with surge brakes.) To adjust the brakes, go through the following steps:
Jack up and support the trailer with the wheels mounted, brake drums cool, and the actuator in the towing position.
Compress the actuator mechanism several times to center the shoes in the brake drum, then return the actuator to the fully extended towing position.
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.

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.