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# REGATTA TIME 

by Jay Limbaugh

There is a Lightning Regatta underway almost every day of the week somewhere in this world. Thousands of sailors travel to two or three Regattas away from home every year and then there are thousands more who probably average a dozen Regattas away from home each year. By far, the majority of Regattas are a three race series and assuming that actual racing time is about six hours per Regatta, this is small compared to the amount of time spent by the skipper and crew in the preparation for traveling to, making ready for haul in, packing up and making ready for travel after haul out, and traveling from the Regatta. After many years on the Regatta Circuit my estimate is that the ratio is about one to five when averaging out the time spent racing at a Regatta and the time spent preparing for and getting back home after the Regatta is over.

Regatta Time is Vacation Time, Vacation, to me, means a number of things, i.e., relaxation, having fun, and in general it means to all of us, I believe, doing something that we enjoy and doing very little of what most of us consider 'work'. Since most of us enjoy sailing or racing much more than we enjoy the part we consider work, the idea then is to reduce the amount of time that is spent on the work items.

A regular and dependable crew helps substantially in the planning, organizing, and execution of the work items for a trip. Of course, this is not a necessity and by far the most important point is that the skipper be organized himself, that he has everything that is required, that all of the necessary things get done in a minimum amount of time, and that no one person who is making the trip, and this includes the skipper, is saddled with all of the work items. If they are, the Regatta trip will not result in an enjoyable vacation or a relaxing weekend. Most of the sailors 1 know do not have another hobby, in fact, sailing has been a hobby since early childhood and I'm confident this same hobby will be continued by these same people for the majority of their lifetime. This being the case, let's plan and organize for the Regattas so there is less time spent working and more time sailing and our Regatta-Vacation trips will be more enjoyable.

For those of you who have not yet attended a Regatta away from home, let me say now that I think you are missing something. If you are properly prepared and organized for the trip usually things will go well. You quickly will become a more competitive sailor in your home fleet as a result of it and I firmly believe there is nothing that will get your mind off the every day problems of the business world like hitching the trailer to the car and taking off for a Regatta. Let's get ready to go by first tearing down the boat.

## Inside the Boat

Take main and jib sheets loose, coil and put in plastic bucket under the foredeck. Pull spinnaker sheets through the deck with brummel hooks snug on the aft deck, coil and hang under deck. This will keep them clean and dry. Disconnect hiking straps (one end only). Coil and hang under deck. Disconnect boom vang. Place two life preservers, one
fore and one aft, on the starboard seat. Remove boom from mast and place on life preserver. Spinnaker pole, tiller, boom crotch, and paddles can all be placed with the boom on the life preservers and quickly lashed down to the seat securing with two small pieces of shock cord with a hook on each end. A protective cover of some sort for the rudder is desirable. Place rudder on aft seat and lash down with a piece of shock cord, hook on each end. Put a towel, sponges, or your anchor line under the anchor to keep it from scuffing the boat. Tape the mast step blocks in place and the deck blocks and tow line can be thrown in the bucket with the jib and main sheets. Your little cloth tool bag, which should contain only those small tools that are essential for racing. can also be thrown in the bucket. (On our boat 'essential' tools and fittings are a few miscellaneous nuts, bolts, and screws, pliers, screwdriver (slot and phillips head), awl, a small length of $1 / 4$-inch line for use in jury rigging, small oil can, tape, and a file.) Open the bailers, pull the centerboard all the way up and fasten securely, take the slack out of your barber hauls and snub in on the jib wire and cloth down hauls. We stow sails well forward under the deck when traveling. Battens can be kept in the boat at all times, they should not be thrown in the bottom or left to lie in areas where they get wet and crooked. A most satisfactory way to store or haul the necessary battens aboard your boat is to attach a small diameter plastic thin wall tube somewhere under the forward deck. This will keep them straight and dry and eliminate at all times the danger of forgetting to take them along. If you don't have a tube, tape them down to something flat, like the cap of the centerboard trunk. Attach shackles of jib and main halyards to spinnaker pole fitting on mast. Pull spinnaker, main, and jib halyards taut and wrap all excess line around the mast, beginning just below spinnaker pole fitting on the mast. (This will keep the halyards taut after wrapping.) Loose ends must be tucked under securely to avoid unwrapping. Loosen all stays, leaving pins or bolts in the stays. Unstep mast. If you are experienced, two people are adequate, if inexperienced, by all means use three or four. If the wind is blowing hard, station one person downwind to catch the tip if it should get away from you.

## Mast

After considerable observation and trial and error on my part, I've found no better way to prepare a mast for the road. Coil the fore and back stays individually and tie each to the jumper strut with small pieces of line. A small board with a slot in the middle to which is attached four pieces of shock cord approximately 10 inches long with small hooks on the loose ends is placed on the butt end of the mast. A hook is then slipped over the pin of each of the side stays. Length of the shock cord should be such that the side stays are reasonable taut. At this stage, approximately ten pieces of small line, about 15 inches long, will be used to lash the halyards to the mast. This will avoid chaffing. A red flag should be tied to the tip of the mast. Let me remind you now, when you get
to the Regatta and remove the flag all of the little tie lines and the block at the butt of the mast should be wrapped in the flag, tied, and put with your other 'road' gear.

## Lifting Bridle and Mooring Lines

Boats that cannot be lifted with bridles should be barred from Regattas! You should have a bridle, coil it and the mooring lines you will need and put them in the bucket. I guarantee you that after you get to the Regatta, if your wife runs off with the car you will still have everything that is required, no more and no less, to rig, haul in, tie up, and for that matter, race your boat.

## Trailer

A good trailer, properly equipped, is absolutely essential. It is just as important for the newcomer as it is for the seasoned traveler. It should be equipped with a kick-up wheel on the forward end. This makes for easier and safer handling of the boat and trailer when not attached to the car. Good tail lights, permanently attached to the trailer with an easy plug in arrangement to your car, are essential. A most desirable feature for trailers is a prop, permanently attached, that can be easily dropped from the aft end of your trailer which will keep the boat and trailer from tilting up and hitting the skeg during the rigging or unrigging process.

Top bunks that are light in weight and can be quickly and easily attached are highly desirable. I have seen several good arrangements. I recommend steel rods that are permanently attached to the trailer. These can be flipped up into a slot on each end of the upper bunk and a wing nut and lock washer keeps them in place. It takes only seconds to put on or take off and there are no loose parts of any kind to lose or take care of. (Put the wing nuts right back on the rods when not in use.) The top bunk serves a dual purpose, one, of holding the boat tight to the trailer and two, of providing a safe place for the mast during traveling. Each bunk should have a padded nest in the center for holding the mast. Place the yard fitting even with the transom. Under the mast at the bow and transom of the boat place a pad or padded block to keep the mast straight and tie it down. At the transom, I use a two foot long I/4-inch diameter piece of good line with a knot in one end. I run this up through the top gudgeon around the mast and through the spinnaker halyard fitting, a small piece of eloth around the mast before tieing eliminates chaffing. At the bow, a piece of shock cord through the shackle of the jib down haul and around the mast does the job. Whatever you do keep the mast straight while hauling it.

It goes without saying that the bunks on your trailer should be properly spaced (approximately 10 feet apart) and adequately padded. A bottom of some kind on your trailer is more than worthwhile. Fenders are a must. Your boat should be placed on the trailer so that you end up with 50 to 60 pounds of weight on the hitch. Safety chains that can be easily attached to the car are a necessity. A spare trailer tire and wheel, both in good condition, should be attached to the trailer, chain it on with a small chain and combination lock so that it will always be there when you need it. While we're on the trailer, let me remind you that the wheel bearings should be packed at least once a year and probably twice if you are a circuit traveler. Your trailer ball, when attached to the car, must include a lock washer in addition to the nut. Don't start out without it.

## Road Trailing Cover

Except when they are absolutely required for safety or security reasons complete trailing covers are for the birds. There is just too much work and time required in the use of them. Under certain conditions they are desirable of course, but when traveling to the normal Regatta on today's highways they are not worth the trouble. The amount of dirt you get on your boat, especially with a bottom in your trailer is negligible and the time required to sponge off the boat is nothing compared to the time and energy expended with complete trailing covers.

The use of the cockpit cover when at a Regatta, in my opinion, is also a waste of time. They are, of course, almost a necessity for protection of your boat during the sailing scason at home.

## Road Box

Call it what you want but we call ours a Road Box and it is a permanent fixture in the back of our car during the entire sailing season. During the off season it remains intact but we store it in a different location. The items we carry in this box are only those that we have found a need for while traveling to and from or attending Regattas, or those that we have anticipated a need for under the same conditions. Our Road Box is a good grade cardboard carton size 24 inches by 18 inches by 10 inches deep. In it we have the following items: 100 feet of $1 / 4$-inch nylon line, can be used for any line in an emergency; jib down haul wire and shackle; centerboard cable complete with fittings; small glass jar full of miscellaneous nuts, bolts, and screws; coffee can full of miscellaneous cleats and fittings; fiberglass patch kit complete; jib halyard wire with fittings; hammer; chisel; diagonal cutters; phillips head screwdriver; large screwdriver; hacksaw; one $10^{\prime \prime}$ pipe wrench; one $10^{\prime \prime}$ crescent wrench; one pair vice grips; small drill with bits; two sets of wheel bearings for trailer; small glass jar of wheel bearing grease; one inner tube for trailer tire; one First Aid Kit; sand paper; some gummed cloth tape for patching sails; three pair of gloves; one small length of shroud cable and four small cable clampsl flashlight; small box of trailer light bulbs and extra fuses for the car; combination for the lock on the extra trailer tire is written on the side of the Road Box (Registration paper for the trailer stays in glove compartment of the car); extra trailer ball; extra wing and lock nuts for the rods that hold the upper bunks to the trailer. Extra battens and old towels for use in wiping down the boat stay in the car at all times.

Don't forget your stop watch. sunglasses, and foul weather gear.

## Before You Trail

If you have never backed a trailer you should practice backing with your trailer at home. Experiment until you think you have it down pat.

Test check your trailer brake and signal lights.
Set up the jack from your car on your trailer to make sure that you will be able to use it in event of a flat on the trailer; you may find that you need a different type jack. (If you do have a flat on the trailer, it is best to leave it hooked to the car while changing.)

Check with your insurance agent to make sure that your policy covers travel to and sailing on the waters of the place where you are going. Watch out for the 'layup' period when going to a Regatta out of season.

Some states have limitations on the amount of overhang you may have outside your trailer without lights on the outermost tip of the overhang. Ask about this ahead of time or be prepared to make adjustments if need be.

## On the Road

If you've never trailed before you would do well to 'alter course slowly' on the road. This will prevent trailer sway of 'fish-tailing.' If you still get a whip lash check to see that there is proper weight on the hitch and that the alignment of the trailer wheels is o.k.

Your trailer will follow you but always be conscious that you have that trailer on there. Particularly when passing give yourself sufficient room. Don't maneuver yourself into a spot where you can't get the trailer out, too.

When you stop for gas or lunch check your trailer to see that the wheel bearings haven't become overheated and check the hold downs, etc., to see that they are still secure.

If your trailer causes static on your car radio, try grease on the trailer hitch ball.

An outside mirror on the driver's side is a necessity. One on the right hand side might also be helpful.

In the States, when driving on turnpikes, take note that with your trailer you are considered a 'truck' and you must obey the 'truck' speed limits. (This only applies when you are being followed by a patrolman.)

## Upon Arrival

Pick a spot to park your trailer where you will have room to walk around it and where there are no overhead electrical wires to get your mast in when you step it. At this point, check to make sure that you will have a clear patch to the hoist, too.

## Put the Prop down on the Trailer!

Before stepping the mast, make sure that it is clean, that all tie lines have been removed, and that the shrouds and halyards are not fouled in the jumpers (and that the mast track is facing aft).

Put the boat together, reversing the process you used when dismantling it for the road. When you close the bailers put a sponge full of water in each.

## Mooring (Dry sail if you can!)

First thing you want to do is to try and find a spot where you can tie up with both a bow and stern line without having to use an anchor. A good grade of line comparable to the size and quality you would consider adequate for your main sheet is desirable. Make sure after the boat is tied that none of the lines will chafe on the sharp edge of the pier. If so, a piece of an old towel wrapped around the line at this point will prevent chafing.

If you anticipate any appreciable movement of the boat due to sea conditions or power boat wash it's a good idea to use a rubber snubber or a spring on your tie lines to absorb the strain of the boat working in the slip.

If there is any possibility of the boat swinging you should use fenders (your life preservers will do) over the side to prevent chafing on the dock or on other boats. If you are in tide water area be sure to allow for ebb and flood water levels in determining the amount of slack for your tie lines.

If it is necessary to set an anchor for your stern or bow line, drop the anchor as far away from the boat as possible and make sure that it is set securely before leaving the boat.

If at all possible, moor your boat so that it faces in the direction of the prevailing wind or in the direction of any expected heavy wind or sea conditions. A lurd mooring is preferable.

Occasionally, during the course of a Regatta, it may be necessary to be towed to or from the race course. In order to be prepared for this situation, you should carry a tow line 50 feet long. This line should also be the size and quality of your main. When towing secure your end of the tow line to the mast with a bowline that can be released quickly if necessary. If boats are going to follow you in the tow line attach their tow line to your mast on the bow and stern of your boat.

Don't forget to register, read the sailing instructions and take home the hardware.


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# Minor Repairs On Fiberglass Lightnings 

By Clarence Holman

A fiberglass reinforced molded boat has high strength to take bumps with docks, etc., that would cause costly damage to other kinds of boats. But, even this high strength material with its high impact resistance, occasionally gets hit too hard or is abraded too hard. The resultant damage can be repaired by a careful skipper.

A fiberglass Lightning is not a maintenance free boat-no boat is. However, it has reduced the amount of maintenance required. There are only three relatively easy maintenance rules to follow. These will keep your Lightning looking like new.

1. Annually, clean, buff and wax the exterior of the boat.
2. Touch up and repair scratches, scars and small breaks.
3. Repair major breaks as soon as possible to avoid additional damage.

Before we can repair our Lightning we must understand the basic construction of the exterior skin of the hull. This is made of two layers of material, permanently bonded together by chemical action. The outer layer is a colored gel coat. Gel coat is a special resin containing concentrated color. It is only . 015 to .020 of an inch thick, but it provides a hard, smooth, finished surface. The second "layer" is made up of polyester resin, reinforced with fiberglass material (mat, woven roven, cloth, or chopped glass). Both the gel coat and polyester resin are cured by a chemical catalyst MEK which causes them to form a hard, strong mass.

Inside this, the sandwich material is applied. The common materials are balsa, eurethane foam and P.V.C. foam. This core is then covered with fiberglass resin and fiberglass material. This makes a rigid structure that resists flexing and improves the floatation of the structure.

When buffing your Lightning gel coat, care should be taken not to cut through this thin gel coat surface. The areas that you need watch carefully are stem, chine, edges of the keel and corners of the transom. You may do this by hand by using a rubbing compound such as 3 M heavy duty rubbing compound or with a power buffer use the same compound. After buffing, any high quality paste wax may be applied.

When it becomes necessary to make touch-up and surface repairs to nicks, gouges, scratches and small holes that do not penetrate through the hull the work is simple because only the surface is damaged.

## 1. Damage only to the gel coat.

You will need a small can of gel coat (same color as your boat) and a small amount of catalyst. First, clean and dry the area around the damage. All wax and oil must be removed from the inside of the scratch or hole. Gel coat will not adhere to wax or oil.

Then, using a one-quarter inch power drill with a burr attachment, roughen or grind out the bottom and sides of the damaged area and feather the edge surrounding the damaged area.

Pour a small amount of gel coat into a jar lid or in a small dixie cup, add a drop or two of catalyst and mix throughly. Mix for one minute by the clock. Do not guess the time. If it is not throughly mixed it will not harden properly.

Use a small stick, finger, or putty knife to fill the hole, with
the catalyzed gel coat, about one-sixteeneth inch above the surrounding surface. Lay a piece of saran wrap or wax paper over the patch to start the curing process. Gel coats and polyester resins will not cure to a hard surface unless air is excluded from the surface, but will remain slightly tacky and will not sand well.

Be careful not to sand through the gel coat surrounding the patch. Finish the patch by rubbing or buffing with a fine rubbing or buffing compound. There may be a slight color difference, this is generally due to the weathering of the gel coat.
2. Gouges and holes that do not penetrate through the hull.

As done above, clean and wipe dry the area around the damaged area. Clean all wax and oil out of the damaged area. Using your one-quarter inch power drill with the burr attachment grind out the bottom and sides of the damaged area, feathering out the edge. Do not undercut the edge.

Use a jar lid or a dixie cup, pour some gel coat, enough to fill the hole. Mix into this an equal amount of milled glass fibers. This may be trimmed from fiber glass mat or purchased from your dealer. After the gel coat and milled glass fibers are throughly mixed, add two drops of catalyst for a pile of gel coat one inch in diameter. This will give you 15 to 20 minutes working time. An eye dropper is handly to measure the catalyst. Mix the gel coat and catalyst thoroughly, one minute minimum, by clock. I use the clock because most people underestimate the time of one minute.

Now we work this mixture into the damaged area, using a knife blade or sharp stick to work it to the bottom of the hole and puncture air bubbles. Fill the hole one-sixteenth inch above the undamaged area. Put a piece of saran wrap or waxed paper over the patch to keep air away from the mixture.

Allow the patch to harden, sand the patch until it is just hollow, less than a $1 / 32^{\prime \prime}$.

Mix some gel coat, catalyze, but do not add any fibers. Put a small amount of gel coat on one edge of the patch and cover with saran wrap. Use a rubber squeege or the back of a razor and squeege level with the surrounding area. Leave the saran wrap on the patch for at least two hours hours or over night to obtain a good cure. Leave the saran wrap over the patch for at least two hours or overnight to obtain a good cure.

After curing we sand the patch, using a sanding block and 600 grit wet paper. Finish off the patch by rubbing or buffing with a fine rubbing or buffing compound.
3. Patching punctures, and breaks, that penetrate the hull.

You will need some fiberglass mat and cloth, polyester, resin, catalyst and colored gel coat. Material should be available from your dealer. As discussed above make sure the area around the break is clean and dry. Wipe any dirt, oil or wax from around the break before starting repairs.

Using a keyhole saw or electric sabre saw, cut away all damaged area. You may have to enlarge the hole, but you must cut back to sound materials. Working from inside the hull, sand the hole and the area around the hole, feather
back two inches. If you do not rough this surface you will not get a good bond.

Next, cover the piece of cardboard with saran wrap. Tape to the outside of the hull with the saran wrap side towards the hull. If your break is on a contour, you may use a sheet of aluminum shaped to a similar contour. You must cover the aluminum with saran wrap then tape in place.

Now cut a piece of fiberglass mat and cloth, make about 2 inches larger than the hole. Mix some resin and catalyst about 20 parts of resin to one part of catalyst will give a cure in 30 minutes to one hour. Only mix small quantities as large quantities will start to gell before you can use it all. Mix well, at least one minute.

Use a cheap paint brush two or three inches wide. Wet the patch and area around the patch with catalyzed resin. Apply the mat to the patch, then wet out the mat using a dabbing motion with the brush. When the mat is wet out, (the dry area will be white) apply the cloth over the mat and wet out. Cover the patch with saran wrap and squeegee from the center towards the edges, to remove all air and assure adhesion around the hole. Allow the resin to cure, which may take one or two hours.

Now take the cardboard off the outside of the patch. Sand the patch and feather the edge of the patch back two to three inches. Mask the hull around the hole with tape and paper. This will protect the hull while you are working.

Using a rubber squeegee to work out the air bubbles, work from the center towards the edges. This will compact the patch. Allow the patch to cure 15 to 20 minutes.

As soon as the patch is rubbery, cut away the excess cloth. Be sure you are cutting outside the feather edge. Do not leave the trimmings on the hull. If you do this trimming before the cure is complete it will save much sanding. Allow to cure over night.

Sand the patch with 80 grit sandpaper, using a sanding block, or a power sander. Fair it with the surrounding area. If any voids show up, fill with catalyzed resin. Allow it to cure and resand.

Mix a small amount of colored gel coat and catalyst, work it into the patch. Use your fingers and get it into all holes and crevices. Cover with saran wrap and squeegee smooth. Allow to cure completely, two hours to overnight.

If your patch is large, you may wish to spray the gel coat. Thin the gel coat one to one with acetone, add two per cent catalyst. To exclude air from the gel coat, spray the patch with parting film. A common parting film called Partall is soluable in water. So after the gel coat is completely cured, wash with warm water and this will take care of the parting film.

Using a sanding block and 220 grit wet paper, sand the patch. Change to 600 grit wet paper for finishing. Buff for final finish, using hand or machine buffing. If there are defects in the surface, just repeat the finishing steps.

A quantity of acetone is necessary, for cleaning hands, tools etc. Acetone is very flammable, so use with ample ventilation and care. It is only useful on uncured gel coat and resins.

Gel coats should be catalyzed with 1 to 2 percent methyl ethyl Ketsone peroxide (MEK). Use the following amounts: I pint of gel coat plus 5 cc MEK equals I percent.
4. Patching punctures, and breaks that penetrate the hull, but you can not get to the inside of the hull to the break area.

When you have a hole in the hull that does not allow you to get at the back side of the hole, i.e. a tank or bulkhead in the way. Then repairs must be made from the outside. Grind the hole back to solid glass. The edge of the hole should be feathered back $2^{\prime \prime}-3^{\prime \prime}$.

Tape off the hole using masking tape and paper, to protect the hull from excess fiberglass and drips.

Now cut a piece of stiff cardboard, $2^{\prime \prime}$ larger than the hole. Cut several pieces of twine about $24^{\prime \prime}$ long. Punch two holes in the cardboard for each piece of twine. Fold the cardboard so that it will slip through the hole. Pull the strings to pull the cardboard tight to the inner hull. - Use pieces of wood or dowels across the hole to secure the string to. Use small pieces of wood or dowel to raise the dowels above the surface. This cardboard must fit tight against the inside of the hull. The only purpose of the cardboard is to give you a base so that you can bridge the hole. Cut some mat and cloth about $2^{\prime \prime}$ larger than the hole.

Mix resin and catalyze as per previous instructions. Wet out the edges, using a cheap brush $2^{\prime \prime}-3^{\prime \prime}$. Use a daubbing motion with the brush, never a stroking motion. Again dry fiberglass will remain white in color. When the mat is wet out, apply the cloth over the patch and wet out. Squeege or brush out the excess resin - work out the air from the patch.

After the patch has gelled for about 20-30 minutes it should be firm but not hard. Trim the excess around the feathered edge of the hole. Strings and dowels can be removed at this time. Allow the patch to cure completely.

Sand the patch completely. Again resin will not bond securely to unsanded surface. Cut mat and cloth to build up the patch to where it is slightly higher than the surrounding surface.

Take some resin and catalyze, mix according to previous instructions. Again do not mix large quantities.

Cover the patch area with catalyzed resin. Apply a layer of mat-wet out. Apply a layer of cloth, wet out. Continuing with alternate layers until the patch is high enough. Small low areas can be built-up by using small torn patches of mat. Tear in sizes as needed.

Now it is necessary to compact the patch to remove excess resin and air. A good tool for this is a $3^{\prime \prime}$ paint roller. Get a roller with a short nap sleeve. The shorter the nap the better. Roll the patch hard, this will compact the patch for greater strength.

Now complete the finishing of the patch as instructed before.

Further instructions and cautions:
If you should get any resin, styrene or acetone in your eyes, flush with great quantities of water. See a doctor immediately.

Use a dust mask while grinding or sanding. Wear long sleeve shirts.

Acetone and styrene are highly flammable, have good ventilation and keep away from heat and sparks.

Resins are also flammable, but have a higher flashpoint, but when ignited will burn until they are completely consumed. They also give off a dense black noxious smoke.

Reference is also made of cheap brushes and paint roller sleeves. These should be considered expendable as the cost of cleaning will exceed cost of the material.

These are methods that have worked for us, however each hole has its own problems. A little ingenuity will solve the problems.

# T.L.C.T. <br> (Tender Loving Care of Trailers) 

By Clarence L. Holman, Jr.

Trailers are generally taken for granted - until something happens - then the trip can become a nightmare. We will cover several of the areas where major breakdown may take place. However we cannot touch on all possibilities. Electrical problems will have to come later.

Trailers on the road flex quite a bit, so closely inspect the trailer frame for breaks in welds of the trailer itself as well as fender brackets. Pay particular attention to where the springs attach to the trailer and to where the frame bends by the forward cradle.

Check the spring hangers for worn or loose pins. Some of the older trailers have grease fittings on these pins, if so grease with chassis grease.

Next check the coupler - some call this the hitch - There are many different types but all need adjusting from time to time. The coupler should be snug on the ball but not tight. A drop of oil will help a lot. While in this area let's look over the safety chains. Are they worn from dragging on the road? Are they strong enough to control the trailer if it comes loose from the car? Are the hooks strong enough and in good working order?

Now let's turn out attention to the cradles of the trailer on which the bottom of the boat rests. Check the condition of the padding on the cradles. 1 prefer to use a pile carpet for this padding. The dirt settles to the bottom and does not scratch the botton of the boat. Hard padding such as canvas or rubber holds the dirt between the boat and the cradle and the working of the trailer on the road grinds this into the botton of the boat.

Many boats are damaged on the bottom and chine by improper shape or adjustment of the trailer cradle. If the cradle is too high at the chine, it carries too much of the load and the chine crushes. If it is too low at the chine it will depress or indent the keel. Be sure to position the boat on the trailer at its riding position before adjusting the cradles to fit the bottom of YOUR boat. Make some sort of location mark on the side of the boat to locate boat on the trailer in its proper position. A small dot or piece of tape will do the trick. It will be inconspicuous but will enable you to return the boat to the same position on the trailer each time. This is most important as the bottom of the boat is quite different at other locations. This will also make your holddown bunk come to the same position every time.

Next we will consider the wheels and bearings. Most boat trailer wheels, hubs and bearings are similar to automotive bearings. However our use is a little different so we must take better care of our bearings. Most of us run our trailers into the water to float the boat on or off. If the trailer is used immediately on the highway, little or no damage is done. Most of the moisture will be dried out of the bearings. However, continuous dunking will cause the grease to emulsify. If you put the trailer into the water, then after removing it just let it stand until the next launching. The water will rust, stain or pit the bearings or races. This does not happen over night but rather over a period of time.

Bearings that have been in the water should be greased a
minimum of twice a season. The first greasing should be in mid season, say just before your Districts. The next greasing should be at the end of the season. This is the most important one, as the boat will be out for the season. You will have the water out of hubs and bearings and coated with fresh grease for the winter. You will be ready to go come spring. If you didn't do your fall greasing you had better get it done before the season starts. If you do not immerse the trailer during the season, then once a year would be sufficient. Suggest you do it in the fall. The cost is minimal compared to the inconvenience and cost of bearing failure on the road.

Now for you "Do it Yourselfers" I will describe step by step how to take care of your bearings. We use Quaker State Asbestos fibre wheel bearing grease. It has given us very good service over a long period of time.

To remove the hub and bearings: I, remove the small dust cap on the end of the axle. This may be either screwed on or drive fit. The shape is the key as to which kind you have. The screw type will have a hex head, the drive type will have a smooth head with a flange. 2. remove the cotter in the nut on the end of the axle. 3. remove the nut on the axle. 4. Pull the wheel towards you - this will remove the tongue washer, hub, outer bearing and the inner bearing and grease seal will be in the hub. The tongue washer and outer bearing can now be taken out of the hub and placed in a small can of gasoline for cleaning. The inner bearing is removed by placing a piece of wood approximately $1^{\prime \prime} \times 1$ " $\times 12^{\prime \prime}$ through the hub while the wheel is lying flat on the floor, bearing side down, several sharp blows with a hammer on the end of the wood will knock the bearing and seal loose.

Clean all parts, including the axle, with gasoline to remove all the old grease and grime. Now, after drying, work the grease into the clean bearings. Remember, only grease on the bearings is going to do any good. So work the grease deep into the bearings. Coat the races on the axle and in the hub - put the large bearing into the hub - use this last opportunity to force grease into the bearing. Now, put the grease seal into place - make sure it is put back the way it came out and not reversed. Place the wheel on the axle spindle, put the outer bearing in place, then the keyed washer, followed by the hex nut. (Do not waste time or grease by filling the hub with grease). Tighten the nut until the wheel will now turn freely with no end play. Put the cotter pin in place and bend to lock. Now install the dust cap and the wheel is set to roll again.

Tires are another source of trouble. Most tire trouble is caused by improper tire pressures. Most trailer tires use higher pressures than automotive tires. Low pressures will cause excessive flex with heat build-up. Couple that with a hot day at excessive speed and the tire breaks down, with loss of tread or blow outs. These tires can become so hot they are ready to burst into flames. In fact, a good simple check while on the road is to feel both the tires and the hubs. They should not be so hot that you cannot hold your hand on them.

Listed below are some of the most common tire sizes with their proper inflations and load capacities per tire. These are all given at highway speeds. If your trailer exceeds the capacity of the tires then you are headed for trouble. In figuring load do not forget to include the weight of the trailer as part of the load.

## Tire Size

Ply rating
$4.80 / 4.00-8$
$16 \times 6.50-8$
$5.70 / 5.00-8$
$18 \times 8.50-8$
6.90/6.00-9
$20 \times 8.00-10$
4.80/4.00-12
$5.30 / 4.50-12$
6.00-12
$6.00 \times 13$
$6.50 \times 13$
Maximum
Inflation
Load* 600
725
630
790
710
900
750
750
910
850
1080
1270
1450
900
1325
1475
790
960
915
1135
1010
1290
920
1050
1275
1275
$7.00 \times 13$
*Highway Speeds

"Happy Lightnings"

# A SAILOR AND HER BIRTHDAY SUIT 

by M. Elaine Tolman

You ask what I'd like for my next birthday gift?
Fancy candy? or love beads? or Gay Gibson shift? A sheer nylon nightie designed for a sinner?
...Perhaps to drive out to the Yacht Club for dinner?
Such gifts once were proper from husband to wife;
But your're Skipper, I'm Crew, in our new way of life.
So buy me no bonbons, no baubles, no ruffles,
Don't wine me on bubbly, don't dine me on truffles;
For whimsies and flimsies I don't give a hoot,
What this sailor needs is a FOUL WEATHER SUIT!
Last August's discussion and family vote
To trade in the ski-craft for sailing-type boat, Included no mention (I'm sure I'd remember)
Of summer's extension - from March to November.
When white-caps come slapping and splashing on deck,
Invading at waistline, cascading down neck,
And each playful, sprayfull, mid-April breeze,

Teases, displeases, and freezes these knees, I try to be stoic and spartan and mute, But I'm crying inside for a FOUL WEATHER SUIT!

Your choice for my birthday was so "apropos". You peeked in my notebook; how else would you know? The gift that I yearned for, spoke naught of romance - But of waterproof jackets and rubberized pants. Now, with hood-string drawn taut, just exposing my nose, With sleeve-shrouded hands and cuff-covered toes, Big Coast-Guard Preserver fits under my jacket, My seat droops to knee-height -
(like grain when you sack it);
One quick backward glance negates any chance:
These bright orange pants have enhanced my expanse.
In such snappy high-style, I may never look cute. . .
But I'm happy and dry in my FOUL WEATHER SUIT!


[^0]:    *Livt cumpiled through Nowemher 1984.

