# MEASUREMENT COMMITTEE RULINGS 

by Herman C. Henschen

When Sta Anderson asked me to write a Yearbook article based on measurement commitee rulings, I knew $I$ wouldn't have to search for material. Since 1959 , measurement committee rulings have been kept in a separare file so that some day someone could compile all of the rulings and issue them for everyone's information. This file is now abour $1^{\prime \prime}$ thick and contains correspondence to and from all corners of the world. To those of you who attend the yearly L.C.A. mectings, the midwinter meerings in St. Pete, and keep up to date by reading Lightning Flashes thoroughly, I apologize in advance for not telling you anything new. Those who are new in the Lightning class or who seldom get a chance to keep up to date may be surprised at some of the rulings which have been made. Those who believe they can learn of a newly legalized "go fast" gadget are in for a big disappointment -- the specifications which were rewtitten in January, 1959, are pretty tight. Most of the measurement committee rulings are interpretations of these specifications and as such can be pretty well anticipated by careful reading of the "specs". May I take this opportunity to warn you not to rely on che information in those old specification booklets you may have. If your specification booklet does not say, "Revised January 1, 1959 " inside the front cover, throw it away and get a new one from Margaret Teske. In addition, you should write for the latest addenda to specifications which will contain even more recent changes.

For brevity, I have not tried to make this information read like a novel-hope you didn't expect to be entertained.

## L.C.A. and Measurement Policies

BOAT NUMBER-may be reserved up to 100 numbers above last number issued but may not be assigned until number comes up for assignment in consecutive order (March, 1961).

- cannot be reissued to a new boat even though original boat was destroyed or altered so it is no longer a Lightning.
- new number cannot be issued for a rebuilt boat unless its hull is cleatly more than $50 \%$ rebuilt.
BOAT MEASUREMENT-fee is a business arrangement between builder, owner, and measurer. I.C.A. is not responsible for failures to furnish approved certificates, lost measurement data, etc.
- fiberglassing a bull does not necessitate remeasurcment of che full.
-hull mast be remeasured if replanked or new keel is installed.


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OFFICIAL MEASURERS-may not measure a boat which he has built, owns, or expects to sail. This in cludes, remeasurement following major alterations. He may measure such a boat if measurement is witnessed by disinterested person appointed by the measurement commitree.

- may not measure boats during their term of office as a member of the measurement committee.
- are appointed only if needed in a geographical area, are acceptable to the local fleet, and have proper technical background.


## Sails

ROACH REEFS are specifically outlawed in the specs. The measurement committee ruling classifes a zipper footed mainsail as a roach reef thereby outlawing it. Likewise, mainsails having roach reef drawstrings (once advertised) are not allowed.
MAINSAILS BUILT FOR BENT SPARS cannot be distinguished from other mainsails. Furthermore, existing girth measurements adequately control mainsail width. Therefore, no attempt will be made to enforce against mainsails buife for bent spars.
FULL FOOTED MAINSAILS have been used to a fimited extent for years. No attempt will be made to limit the extent of fullness. This ruling also applies to the so called "shelf" construction of the mainsail foot.
ADJUSTABLE LUFF JIBS must have a stop on their luff wite to prevent them from being stretched past the maximum luff dimension.
JIBS WITHOUT LUFF SNAPS have been allowed. This practice is sometimes referred to as "setting the jib flying."
"VENTURI SPINNAKERS" have been classified as "per. forated sails" and are therefore outlawed in the specif. cations.
A REINFORCED PLASTIC SHEET submitted for approval as spinnaker material was ruled illegal because it was not "woven fabric."
NYLON SAII SLIMES have been ruled illegal.

## Hull Rulings

THE EXTRA $1 /{ }^{\prime \prime}$ ALLOWANCE Beyond Dimensional Limitations (Boars over 2 years old) does not apply to length dimensions $\mathrm{K}, \mathrm{L}$, and M or $\mathrm{W}, \mathrm{X}, \mathrm{Y}$, and $Z$.
ANY BOAT TWO OR MORE YEARS OLD THAT IS PURPOSELY ALTERED in shape at any point, is allowed the extra $1 / 1^{\prime \prime}$ over the dimensional limitations only where such alteration changes a measurement to become more nearly the same as the standard dimensions (plans) at that point. Where the alteration changes the measurement to become divergent with the plans, the dimensional limitations apply.
HULL LINES are meant to be fair curves. There should be no concave surfaces on the hull cxterior even though the points establishing those surfaces are within the tolerances. (This situation is particularly apparent when an attempt is made to reach the maximum allowable " X " dimension.)

THE BASE OF THE STEN must fair into the bottom with a minimum radius of $4^{\prime \prime}$ ovet a distance of at least $4^{\prime \prime}$ (template chord length).
THICKNESS OF LUMBER used in construction of a lightning must be as per plans. We admit that nominal 4/4 lumber as used in building homes, etc, is more casily obtained, but if $7 / 8$ " lumber, for example, is specified, the lumber must be no less than $7 / 8^{\prime \prime}$ thick. Nommal $4 / 4$ lumber may often be only $11 / 16^{\prime \prime}$ thick.
THICKNESS OF SIDE PIANKING must not be less than $5 \times 1$ even though the boat involved is old, heavy, and obviously not a racer.
TYPES OF WOOD which may be used in lightuing construction are libexal, Many types of fri, yellow pine, white pine, etc, ate allowed in lien of wood types stated in plans. Exceprionally light woods (balsa) or exceptionally heavy woods (lignum vitae) ate not allowed.
WIDTH OF SIDE FRAMES shall be $27 / \mathrm{s}^{\prime \prime}$ minmum measured at the widest surface (aft face in forward part of boat and forward face toward stern of boat)
REIOCATION OF BOTTOM FRAME at station $4 / 2$ co increase clearance to centerboard pin is not allowed.
SIDE FRAMES shall lap over the bottom frames as shown on plans. This juncture may not be made with a butt joint.
BOTTOM FRAMES shall be molded to $1 \frac{1}{2}$ " except that they may be less than $11 / 2^{n}$ where flattened to provide "seat" for keel.
BOTTOM AND SIDE FRAMES may be rounded to a radius of not more than $1 / 4^{\prime \prime}$.
PL,YWOOD DECKING is" thick may be used in place of $5 / 16^{\prime \prime}$ where the latter is difficult to obtain.
A GASKET may be used at the junction of the centerboard trunk and the keel to prevent leakage. However, the gasket may not extend into the slot.
THE OFFSET WHERE THE $1 / 4^{\prime \prime}$ CENTERBOARD TRUNK LOG MEETS THE \%/s"TRUNK sides may be eliminated by tapering from the $1, /^{\prime \prime}$ thickness to $7 / 8^{\prime \prime}$ but the $1 T / 4^{\prime \prime}$ rrunk $\log$ thickness must be held for the specified $9^{\prime \prime}$ beight.
RUB RAILS may not be wider than $1 / 4^{n \prime}$ at any point.
RUB RAILS may be made of any material having the same weight as wood. This is actually a specification but is not widely known judging from the number of inquiries.
THE AFTER EDGE OF THE SKEG may not be made concave so as to "nest together" more closely with the rudder.
THE LENGTH OF THE SKEG on bonts buite priot to November 1, 1959, may be not less than $371 / 2^{\prime \prime}$ when measured to the keel and not more than $401 / 2^{\prime \prime}$ when measured to the bottom.
FLOORBOARDS AND SEAT SLATS made of teak need not be painted.
CUPRINOL may be used as a substitute for painting or varnishing the inside of a lightning. The measurement committee cannot distinguish wisely between every known coating.
THE DISTINGUISHING COLOR BANDS painted on the edge of the deck are not termed covering boards for the purpose of Art. V111, paragraph 1.
PREFINISHED DECK COVERING with a canvas back: ing is allowed in place of canvas.
THE 715 POUND MINIMUM WEIGHT LIMIT for boats covered with fiberglass has been dropped. All boats have a 700 lb . minimum.


Engineered sails for
superior performance

[^0]AN ELECTRIC BILGE PUMP may be used in a lightning but its batteries cannot be weighed with the boat. FIBERGLASS RUDDERS are acceptable. This is actually a specification but it has never made the ptinters.
HIKING STRAP IOOPS OR LINES which extend above the deck are not allowed.

## Spar Rulings

NYLON OR PLASTIC SAIL TRACK is not allowed for use on the mast or boom.
THE THICKNESS OF WOOD used in constructing the boom shall be $7 / s^{\prime \prime}$ plus or minus $5 / s^{\prime \prime}$. (Measurement Committee to request adoption into specifications.)
BOOM VERTICAL AND HORIZONTAL DIMEN. SIONS shall be within $1 / 4^{\prime \prime}$ of dimensions shown on plans except for the forward end for a length of one foot and the aft end for a length of six inches. (for gooseneck and outhaul variations)
THE "T" DESIGN OF THE BOOM must be maintained for its full length-flat section may not be removed to accommodate outhaul.
THE MAST SHALL BE BLOCKED fore and aft at the step and at the deck to prevent movement "of the mast at any point nor any adjustment of standing tigging during any race" (Specs, Article XII, last paragraph)
LIGHTNING MASTS may not be built in whole or part with cedar.

## Rigging Rulings

A BACK STAY TOGGLE was allowed in a zuling made in October 1959. The toggle was designed to facilitate backstay removal prior to hauling or launching the boat. It was made clear that manipulating the toggle during a
race was not allowed. Serictly speaking, the use of a soggle to adjust the backstay for light or heavy air is in violation of Spec's Arricle XII, paragraph 3-"standard turnbuckles only." This is a violation even though the toggle is manipulated before the race.
A TUBE may be used in place of a sheave for the main halyard. For the purpose of mast measurements normally made to the sheave groove, the point where the tube emerges from the aft side of the mast shall be used. This little known ruling was made in May, 1959.
A BOOM VANG ARRANGEMENT which pulls the boom down towatd the deck in the vicinity of the sheer is allowed.
A MAIN SHEET BRTDLE whose pulley is not secured ar the center has been ruled a traveler and is therefore ourlawed under Spec's Article XIV, paragraph 3.
A MAINSHEET BRIDLE which can be adjusted athwartships is not allowed. This applies regardless of whether the rig is on the back deck or in the cockpit.
HALYARD HOOKS or other devices which secure the hoisred main or jib halyard more rhan a few feet above the deck are not allowed.
ALUMINUM FITTINGS-At the time of the writing of this article, the aluminum fitting question is being given further study. Notification of the decisions of the measurement committee will be made in Flashes.

The above rulings represent $100 \%$ of the talings on file. We hope you will use them wisely in helping to maintain the lightning as the best one design class in the world. If you have questions at any time on the interpreta. tion of the Lightning Specifications, write the measurement commitze.



# Thoughts On Racing Starts In Large Fleets 

By Boh Lippincott

The thought of starting a race in a fifty or mote boat fleet is frightening. Here are some ideas that may help you overcome this fear.

To begin with, unless there are local conditions to the contrary, there should be no favored place on the line to start if the committee has done its job correctly. A committee has done its job well if you can't be sure which end of the line is favored.

In spite of the above statement, at the ten minute warning you must start making your decision as to where on the line you wish to be when the gun goes off. I camot stress too strongly the importance of being up on the line and moving as fast as possible. Find the favored rack by luffing your boat on the line, by checking the flag on the committee boat, by observing your own wind indicator or by any other means at your disposal. If the starboand tack is favored you must start near the starboard end of the line. The reverse is truse if the port tack is favored.

The thoughes discussed up to now would apply to any race large or small. Now we start to think more along the lines of a big fleet race. A jam up at the starboard end, which is usually the committee boat end, can, be fatal as you know, and should be avoided. Coffin corner, or the leeward end, is even more risky. If neither end is favored look for the most thinly populated area. Try nor to get next to a person who you know to be a good

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starter because you will probably have to fight to keep him from affecting you or your wind, while the fieet saits away. I like to find a hole in a line of boats and hug up to the weather side of the hole so as to have as much room to leeward as possible. This maneuver allows me to wrap full and pick up speed without affecting soneone to leewatd who would have rights. Sometimes you can make such a hole by luffing slowly along and slightly to windward. It creates a kind of shadow into which sailors are reloctant to venture.

Be careful of sailors with a chip on their shoulders. Do not stand for bluffing but do not look around to see who you can disqualify. You may be luffing your way out of the race because while you are doing this the fieet will seem rudely disinterested and will not wait to see the outcome. I prefer to be selfish and concentrate on boat speed and getting out in front. Remember to stay clear of other boats when jockeying around befor: a race so that you do not tempt some one to call for rights. I might say here that in all of my experience in starting races there have been only three or four times that any sailor really had enough time or poor judgement to call for his righrs before three minutes before the start except in the case of pure accident.

I make it a rule never to get more than half the length of the starting line away from the line after the ten minute gus and generally speaking unless there is a definite wind shift you should have your mind made up at the time of the five minute gun as to approximately where you want to start.

If you are caught in coffin corner quickly evaluate your chance of clearing the buoy or stake boat and anchor line. If you are not absolutely convinced about clearing, get out of there quickly before it is too late. You will probably bave to jibe and hope for an opening, otherwise, port tack behind the fleet. Your decision, when on the other end of the line, must also be definite and planned because of the large number of boats that may be forced by any one asserting their luffing rights to leewatd. I have seen the blame passed to weather ten or more boats. The problem is even more acute when the committee boat is long and the seas rough.

If you know you are on the line or are a little worried about being over the line you have made a good start, unless you are called back. Do not barge in a large fieet as the advantages do not warrant the risk. You will be disqualified under the eyes of the committee or, at best, forced over the line early. From this position there is very little chance of recovering as there will undoubtedly be a large number of late starters with which so contend. Remember you are not guilty of barging until you affect some other boat so you may get some help from the before mentioned hole to leeward.

Here is one final thought that comes to mind. The larger the fleet the more you should concentrate on having air in your sails or readily available at all zimes after the five minute gum, with this thought becoming mote vital as we approach the time of the gun.


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# RAGGING THE RULES <br> Or: Playing With Fire In Using The Book To Your Own Advantage. 

By Ole Man Lightning Karl Smither

In presenting this analysis, let it be clearly understood that I do not recommend all these stratagems to an unlimited degree. It is possible to be a crack racer and still not be a gentleman.
LUFFING. A savage luff is completely legal. Seldom will a competitor in a one-design race permit another to sail through him close to windwatd. Some skippers do not use care to keep to windward quire far enough. This provides opportanity for a practice common in Olympic and Pan-Americatx tacing, we ate told: working gently to windward until fairly close abeam to a windward competitor, and then when about bow to bow, still well ahead of the windward helmsman gaining mast line, a quick push on the tiller tags the unwary windward yacht out of the race. The windward yacht can sometimes be lulled into a sense of security by the leeward yacht making only gradual or slight course changes until the trap is ready to be sprung. In some areas this is considered quite sporting. BUT, if you are the windward yache, be alert and ready to hail "Mast line!" the moment this change occurs, and it can occur mighty quickly as the leeward yache luffs.


HOLDING COURSE. It is very important to distinguish between luffing and holding a straight collision course. During the North American Championships at San Diego an interesting situation developed at the starr. W and M were loafing along the starting line. (Diagram A) L sailing faster, overtook both windward boats and having atrained mast abeam on M proceeded to luff slowly. M responded, resulting in gentle contact on W's quarter. (Diagram B) While no protests were entered, an alert race committee hailed all three skippers before it, and disqualified $L$ for altering course withour haffing rights on W. In this spot it's most vital that W maintain sufficient speed to prevent $L$ and M from gaining mastline on W. Gretel used this same rule power back of the starting line to drive Weatherly actually away from the starting line at Newport. Weatherly finally jibed to ger our of the hole Gretel had her in. BUT, had L and M been sailing converging courses as in diagram $C_{t}$ it would be a matter of life and death for W to luff sufficiently to keep clear, whecher or not $L$ and/or $M$ had acquited mast line luffing tights.



WEATHER MARK TO STARBOARD is a special case that occurs occasionally when geographical eestrictions force a race committee to lay out a course with marks to starboard in order to get a beat. Especially in sizeable fleets, Diagtam D often develops as two yachts approximately even to windward are due to round the matk together. P , by overstanding the mark about half a boatlength and then heading off wind slightly for the mark, can force tight of way $S$ to cross her before tacking, because if S tacked right at the mark, she would foul P by tacking too close, since P could strike her before the tack was completed. By being forced to cross P before tacking, $S$ would have to permit $P$ to go through her on the inside ar the mark. Then $P$ with her additional speed could probably kecp ahead of $S$, especially if the next leg were a reach or a run with a hot spinnaker crew aboard P. BUT it is more dangerous to hit $S$ than to alter conrse at the last moment, because questions of fact must be settled to the satisfaction of the Protest Committee.
ROUNDINGS RIGHTS. At the leeward mark is where the inside boat should rake advantage of the rules to the hilt. Chapters on how to make a good rounding have been written, so discussion of the importance of rounding so as to be able to gain most to weather and hold full way, could be redurdant... But there still is a tendency for some skippers to let themselves be crowded and bluffed by the outside boat into less than a perfect rounding. Recent appeals decision $\psi 83$ reaffitms the inviolability of the inside boat, even while in the act of jibing. So, sail your own boat race regardless of shouts and screams from the boat you are forcing to sail a longer course. Even in a confused sea which we know features breezy roundings in a big fleet, the outsider is obligated to anticipate and allow room for your being tossed about. Protest him but quick if he does not.

In conclusion, do keep a clear eye on the facts in actions so that the protest committee does not surprise you with what you consider is the wrong disqualification. Square sniling is more fun than sea-lawyering, and you are less likely to get burned.

# "SAILING TO LEEWARD" 

By Tom Allen

Undet normal conditions sailing to leeward is not too difficult but becomes more so when the conditions permit planing and or surfing. When rounding the weather mark (or prefetably before) one should decide which is the fastest way to the next mark, paying particular attention to wind ditection, number of boats ahead (particnlarly where the slow ones are), different wave size, wind direction and velocity. These last three may sometimes be told by going around the course before the race or by noting land or open watet to windward. Probably the most important are the slow boats for you can't sail by close to leeward and if you cry close to windward they are the ones which usually like to take you to the moon. I feel this is not a good maneuver for them for they would place better if they would get around the course as quick as possible and not rake the time to slow someone else dowr who will probably beat them anyway. With this in mind try to keep far enough away where they can't bother you.

Quite often there will be a parade with the boats going high for the first two-thirds or so of the leg. In this case the chances ate best to take your licking at the weather mark and go ro leeward. When you do this the chances are that you can sail most of the leg unmolested. Now that you are alone yout main concern is boat speed. To
achieve this first get the spinnaker flying quick, ease the outhaul, downhaul and tighten the vang so the main begins to look more like a spinnaker. At the same time keep the boat almost flat and pull the board up so the helm is negligible. Now move the crew continually so that the helm is o.k. and so that the transom is not dragging in the water. This weight will have to be changed often due to changes in wind velocity and or waves. Continually keep lecting the spinnaker sheet out until the weather shoulder is about ready to fold. If it does, give it a very sharp short jerk. Ease the main out till it starts to luff and then pull in a bit.
Sometimes on a close spinnaker reach the main should be in even more to avoid some spinnaker backwind. If you can't hold the boat down keep the spinnaker full and ler the main luff. When the wind is puffy go slightly low of the mark in the puffs and high in the lulls. This keeps you in the puffs longer and gets you to the next one sooner. Waves are a tough thing to cope with, but usually it is best to go dead down at first and then when you have more speed head bigher to stay on the wave as long as possible. When you come off a wave move forward or the transom will dig in. Also when altering direction or speed don't forget to change the set of the sails accordingly.

# THE SECOND LIGHTNING CLASS WORLD'S CHAMPIONSHIP Chorrillos, Peru, November 29-December 9, 1963 

By Jose Barreda-Mollex, President<br>Peruvian Lightning Class Association


#### Abstract

When Jay Limbaugh wrote to mee early this year asking whecher we in Sourh America would be in a position to play host for the Second World's Championship, sometime in 1963, it looked like he had just timed perfectly the moment to make his inquiry. By the end of that month of January we were holding here in Peru in the waters of Ancon, home of fleet 265, the VIII Sourth American Championship to be attended by representatives of seven countries. It was the second time that such a Regatta would be held in Peru and we meant to make it the most successful of them all. And so it was.

All the delegares, skippers and crew members participating were unanimously in favor that a South American Country should be in charge of organizing the next World's Championship and it was also unanimously approved chat it should be Pers the country to play host. We sent the invitation to the LCA and the Executive Committee accepted it in May, 1962.

The four Peruvian Lightning fleets have been trying to take home the organization of the Championstip and after carefully considering the pros and the cons it was finally decided that the Championship would be held in Chorrillos, a suburb of Lima where Club de Regatas Lima has the necessary facilities. Chortillos is eight miles from downtown Lima and there is good and rapid transporta-


tion for those who will stay in the city. The Club has accommodation for eighty men in its dormitories and four large shower and locker rooms, used for over one thousand people on summer holidays. Every participant will be provided with a focker and will have access to all the club facilities during their stay,
All single men will be accommodated at the Club and martied couples will stay in a good hotel in Lima. Free breakfast and lunch will be provided to all participants wich our compliments. We will also provide for boats tramsportation from the United States to Callao and back.
The date has been set for the first week of December as this is the best time of the year for sailing and for tourism. It is lare spring, there will be nice winds of eight to fifteen miles and the temperature will be from sixty-five to seyenty-five degrees during the day, going down to sixty to sixty-five in the evenings. It never rains here and there has never been a storm.
We understand that practically everybody will come to sail and will do his best to win, but we also know that everybody enjoys good entertainment. So an entertainment committee has been appointed and they are already working on a good program. We may not have bull fighting this time of the year but there will be theatre. native dances and folklore music and visits to the old

Inca ruins. Thete will be at least two big parties at the Club de Regatas Lima and the families of the Peruvian Lightring fans will entertain all our visitors at small patties in their homes. Those who are interested in the cultural aspects of our country and of Spanish civilization in South America will also have many opportuxities to learn a little, visiting museums, attending lectures at the University of Sab Marcos, the oldest of the Americas and in many other ways.

Lima is a city of two millions, with all the modern comforts and attractions that may be found in any of the big cities of the United States and at the same time it preserves much of the old Spanish tradition that makes it the most attractive city in South America for foreign visitors. Cuzco, the center of the Inca Empire, is two hours flight from Lima and special trips to that city and
to the ruins of Maccha Picchu will be organized for those who care to go.

We have already received assurance that the eight South American countries affiliated to the South American Association will attend, flling the entire quota of fifteen boars for this Major Zone. Canada is also sending two crews and it looks that all those who qualified in Buffalo last August to represent the United States, fifteen in total, plus the defending Champion Tom Allen, will do their best to come. I also understand that there is a long wating list of those who did not qualify and want to fill in any vacancy. From Europe we have not heard yet.

Right now we are ready to receive all comers and feel sure that it will be a good Regatta and every body will enjoy the visit. We will do our best for it.

# SO YOU THINK YOU HAVE TROUBLES 

## or

## THE RAMBLING THOUGHTS OF A RC CHAIRMAN

1:55 PM Blam!!!
There goes the fivc. Gun just a litzle early again. Time to run the checklist. First mark-in place, stake boat-on station, ditto second mark. Distance mark on starting line-seems to be holding. Line boat-looks like their anchor is holding


SHOP TT 5.4040
HOME TF 6.2435
now. Where's that card, last chance to check the line. Ah! The wind is in the port phase nowline looks about 80 degrees right now. Hope the wind swings back as planned, squaring up the line. We may fool some of these Lightning skippers this rime and get them on the line instead of barging. Weather? OK.
Timer: "Four minutes to go!"
Race committee positions? Gunner? Reloaded, snfety on. Signals? Blue up, red signal ready. Anchor holding? OK. Recall signal bent on? Good. Scorets ready? As usual. Smile you fool, don't let everyone see you're as nervous as they are. Charlie has the walkie-talkie working again. That VIP at the horn button? Good. SMIIE.
Timer: "Theee minutes to go!"
Chairman: "Mr. Gunner, that five was very good. Now remember, try to drown out the word gun? OK? Good." Smile you idiot, SMILE.
Chairman: "Everyone all set? Good. Now if we can have complete quiet for the next few minutes? Thanks." Timer: "Two minutes thirty seconds to go." OK. You have thirty seconds to relax and light up. Hold it! You already have one lit. Relax Boy, Relax.
Timer: "Two minutes to go." He's a good timer. Doesn't see much of the start, but knows we depend on him. Well where are they? Where's that green boat that cruises above the line?
Chairman: "Mr. Bowman. Please keep your eye on that green boat up there. Write down the sail number of the boat to leeward of him when he ducks back in, if it looks close. OK?

Where's the boar with the big sail numbers? He generally figures the line pretty close. There he is on port, coming back this way below the line. -Hey! The other end is pretty empty, did I miss? Thought I had it favored enough. Every-
one seems to be coming to this end??? What happened?"
Timer: "One minute, thirty seconds to go."
Whew, they're starting to turn. Let's see, one minute line, that first boat about twenty seconds away,-thar's better. HERE THEY COME!!! Everyone on starboard!! Still lots of room!! Listen to the racket the sails make as they luff!! Did the wind swing? Too lace to check now.
Timer: "One minute to got!!"
OK. This is ir.
Chairman: "Mr. Gunner?" "All set!"
"Signals?"
"Radio?" "All set!"
"Horn?"
"All set!"
"Scorers?"
"Bow man?"

Timer: "Forty-five seconds to go!"
Good! Good! We fooled them again. Half the fleet on the line. Won't be many barges.
Timer: "Stand by to Drop!!-DROP!!!"
Gunner: "Safety off."
Timer: "Twenty seconds and counting."
Looks good-Looks good.
Timer: "Ten seconds."
Line still clear-there goes that green boat below the line. Look clear of that blue boat.
Timer: "Eight-Seven."
Still cleat. -Oh! Oh! Watch that red boat, he's being luffed!1-OK, he sees him.
Times: "Five-Four-Three-"
Still clear.
Timex: "Two-one."
2:00 PM. "BLAMII!

Chairman: "All clear???? Good."
Signal up? Good!! There they go!! Good tuck you guys, wish I were with you instead of here. Anyone behind us? Boy! This guy's twenty seconds late.-All aver now? OK.
Chairman: "Good show, troops. Thanks. Now we do it again. Millie, is this the orange fleet coming up? OK, Thanks."

Timer: "Four minutes to go."
Check the weather mark. Wind still holding. Looks like a good beat. There goes the first group over onto port. Well back to work! Let's run the checklist. Let's see-
Editor's note: The author of this article is Doug Hooper, one of the course directors for the 1962 North Americans.

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# THE CARE AND REPAIR OF AN OLDER LIGHTNING 

By Bill Hughes, \#8546

The following article is not meant to be the last word at possibly the best way to do some work on your Lightnitg, but is meant to be a suggestion of how you might fix it. All of the following have been tried and have been successful.

Problems of finding a leak in a boat somerimes seen perplexing and I have used this method to find the really tough ones.

Pull the craft out of the water and allow, with some help, the boat to get completely dry. Then take a box of dry detergent and very lightly sprinkle it over the entire atea suspected of leaking. Drop the boat into the water rather slowly and the movement of the detergent will indicate the source of the leaks. Don't worry abont the rest of the detergent-it just cleans your bilges.

After a season of sailing, many small and large gouges often show up on the hull. For the small ones, a little cleaning and roughing up with a knife and then filling with a good surfacing fller, such as Woodtex or Durarive, will do the job well and fast.

The larger gouges can be filled with the type the automobile body repairman uses. This for the most part is made up from two components. I have used Marine Tex and it has done many fine repair jobs. If you have a handy body shop nearby, you mighr take your boat to it and let them apply the filler similar to the above.

When the ropsides or transom have been actually stove in, this is a little more serious job. The use of the proper rools make this job more or less an casy one.

The frames should first be checked for any damage and replaced. Then establish the size of the plank to be replaced. Try to span ar least three frames so it is possible to maintain the curvature of the hall. Use an casy workable kind of wood, such as cedar or Philippine mahogany.

By drilling small holes you establish where the frames
ate located from the outside, then draw the exact size of the repait from the center of one frame to the other. Remove any fastenings in this area and cut to the desired size with a roater or small circulat saw set to the depth of the planking. Cut the replacement plank to the desired shape and replace with two part glue and screws.

The router can be used to repair the crack, check an area which is not broken all the way through. This is done by roucing about halfway through the plank, and in this cavity, replace with wood about $1 / 16$ heavier than the void. Use a two part resorsinol glue or HB Fuller resiweld $\$ 4$ epoxy glae. If it is possible to clamp this area, place a wax paper over the glued surface and screw or bolt a latger piece of wood through the hull to use as a backing plate. Later plug and fill the holes left by the screws or bolts.

Splits in the bottom planking can be best fixed by running a saw blade partly through the plank, giving you a uniform size cut and then glue and force in a thin piece of the type of wood ased in planking the boat.

Sometimes painting the inside of the center board trunk is a problem. Try using a small wire and bristle brush as a roller or make a small paddle about $1 / 4^{\prime \prime}$ thick and glue a little mohair on the face of the paddle-use this as you would a roller.

When the inside or deck of the older boat gets varnish or paint tired, try spraying the inside and deck with a spackel paint, the type used on many plastic or fibreglass boats. Be sure to cover well the bright work you wish to keep for varnish trim. Really gives the old tired boat a shot in the transom.

Many of the repairs to your Lightning really are casy if you just start-one way to start is to call a friend and work on it togecher. This way you get two brains, one drinking patrner, and two sets of tools.

## HOW TO TAPE OFF A WATERLINE ON YOUR BOAT

By Mike Eagan, Buffalo Canoe Club

Here is a simple yet sure method to put a perfect waterline on your boat in just a few minutes. Jast a roll of tape and a level or a straight stick about two feet long will do the trick.

Stick one end of the tape at the intersection of stem and keel. Draw out about 17 ft . of tape. Hold the stick or level horizontally, and perpendicular to the vertical

centerplane of boat at chine, about 32 inches from the transom. Now pull the tape tight so that it only touches the boat at the stem and run it along the stick so that it wraps around the side.

That's all there ts to it. Now do the same to the orhee side.

See diagram below.


# TAWAS, MICHIGAN 1963 North American Championship 


"One of the mooniag slits of Threas where yous park jour car right in front of your boat"

## By Charlie Schreck

Tawas, Michigan-Recognized by midwestern skippers as the finest water in the midwest, Tawas Bay at Tawas City-East Tawas, Michigan, is rapidly coming to the forefront and receiving national recognition.

For the second time in three years, Tawas Bay Yacht Club and Tawas Lightning Fleet 152 will play host to a major Lightning Class regatta next summer. They held the last International Regatta in 1960.

The choice of Tawas Bay was made by the committee on the basis of the fine record made when the 1960 Internaxional regatta was held at Tawas. Considering facilities for skippers and their craft, the manner in which the entire reghtta was run off, and the hospitality and facilities of the community.

The twin cities of East Tawas and Tawas City (population shightly more than 5,000 ) are located on the natural sailitg waters of Tawas Bay. Protected by Tawas Point, which teaches out into Lake Fluron, it is possible to lay out almost any type of sailing course. The Bay provides protection such that seldom does a tace have to be postponed because of heavy weather and likewise, there is seldom a day during the sailung season that there is not enough wind for a good race.

Tawas Bay Yacht Club is located in a protected secror
of Tawas Bay. It provides fine launchiog facilicies, slips and dockage for as many as 90 craft, and complete club house facilities. During the 1960 International the club served breakfasts and lunches and even a dinner of two during the event.

The Tawases are consideted one of Michigan's finest resort areas. Adequate cottages, cabins, motel, hotel and restaurant facilities are available to handfe any rumber of visirors. Not a sitigle complaint was registexed to the housing committee dhring the 1960 event.

The officers and nembers of the Tawas Bay Yacht Chub and the officers and members of Tawas Lighering Fleet 152 are proud of their reputation for hospitality. They look forwatd with great anticipation to a successful North American Lightaing Regatta on Tawas Bay in 1963.

Thwas is easily reached over the expanding system of highways both in the state and from all directions out of the state. For those coming from the Northwest, the trip into Michigan over U.S. 2 and over the Big Mac bridge is an experience to be remembered. U.S. 23 from Mackinac City brings you right into Tawas.

Coming from the East, the South or the West, dany super-highways bring you into Michigan, where you will eventually take either 175 or U.S. 23 , which joint near Flint and contimue on as U.S. 23 to bring you to Tawas.

# THE IX SOUTH AMERICAN CHAMPIONSHIP Buenos Aires, February 7-17, 1963 

By Jose Barreda Moller

Club Nautico Olivos was again the site of a South American Lightning Class Championship when twelve crews from six countries tried to get their names engraved on the Permanent Trophy that has now been disputed nine times in nine years, without interruption.

The first South American Championship was held in the waters of this club in February 1955 and was won by Alberto Migone. This year of 1963 was again good for Alberto who not only won the series bue won all five races in different sorts of winds, showing great supexiority over his comperitors. Second place went to Pedro Sisti, also from Atgentina, and third place to Jose Barreda Moller, the defending Champion of 1962 , from Peru.

Winds from 5 miles, in the first race, to 20 miles, with gusts of 30 miles, in the third race gave a chance to all skippers and crews to show their abilities under different conditions. Except for the winner, positions in the Cham-
pionships were subject to change up to the last race, when Pedro Sisti from Argentina, Jose Barreda Moller, from Peru, Isidoro Melero from Chile and Mateo Frugoni from Uruguay were fighting for second place.

Most crews used their own boats and the others were given excellent boats made in Atgentina and in this way the competition was pretty even. Everybody had to use his own sails under the regulations of the Championship.

The Argentinians were excellent hosts and fine entertainment was offered to all participants, sometimes in the clubhouse and other times in the homes of some of the "portenos".

The South American Confederation of the Lightning Class met three times between races and several important decisions were taken, some of them concerning the II World's Championship to be held in Chorrillos, near Lima, Peru, next December.


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