

## Contents

Seven seas are to sail my ships, To the ends of the earth ... beyond; Drifter's gold is for me to spend, For I am a vagabond.

Don Blandina

Comments from Roy Bacon inside cover New Product Review C-20 pages 1-3 Hints & Tips pages 4-5 From the Sailmaker pages 6-7 Maintenance & Repairs pages 8-10

What's Happening to the Fleets

pages 11-12 Class Association News pages 13-14 **New Fleets Forming** 

> page 15 Race Results pages 16-18 What's Coming

pages 19-20

It's that time again and we are all looking forward to yet another sailing season! As is usual at this time of year, we are right in the middle of organizing regattas and endeavoring to improve the Class Association organization. I think that important steps have been made in the Mutineer, Buccaneer and Chrysler 22 Class Associations, to insure continuity of the National Officers. You will see more detail about this in the issue.

Championships...

We have the Midwinter Regatta in Clearwater, Florida, for the first time. Will look forward to increased support from all concerned!

The Buccaneers in Memphis in June. Mutineers in Nebraska in July. Chrysler 22 in Temple, Texas in June.

Again, I have been fortunate in doing quite a lot of sailing in both the C-26 and the one-of-a-kind Buccaneer . . . quite a difference in sailing techniques, believe you me, and entirely different types of sailing ... both very enjoyable!

Our expansion seems to be a continuing thing, I am glad to say. Another welcome, this time to Alexander Tedesco. Ted is a graduate of Purdue University, W. Lafayette, Indiana, and has had considerable sailing experience in many types of sailing boats. If enthusiasm is anything to go by, I am very aware Ted will be a worthy addition to our team and look forward to his taking hold of the Class Association organization from my office in Detroit (as this will be his prime responsibility).

The last six months have been interesting. Again, we have continued our trend of bringing enjoyment into the family circle. Let's all join together and make things happen in an even better way this year!

Cover Photo: The new Chrysler C-20 day cruiser sails under spinnaker on Lake Austin in Texas.

> Vol. 1, Issue 4, Winter 1977-78 EDITOR: Bill Laurent ASSISTANT EDITOR: A. E. (Ted) Tedesco DESIGN: Markey, Hutson, Lerew & Assoc.

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### NEW PRODUCT REVIEW

# Chrysler G-20

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By DAVE KENDALL ☐ Most novice sailors have a healthy respect for the more technical aspects of the sport. Perhaps that's why they seem to form such immediate rapport with Roy Bacon. An obvious sailor's-sailor, Roy never lords it over boatmen less adroit than himself. He communicates, he educates, he listens, and that's why Roy's new-to-sailing friends feel so much at home talking sailboats with him (they write so often that Roy's associates refer to them as his "pen pals").

It's also why Roy has such a fine fix

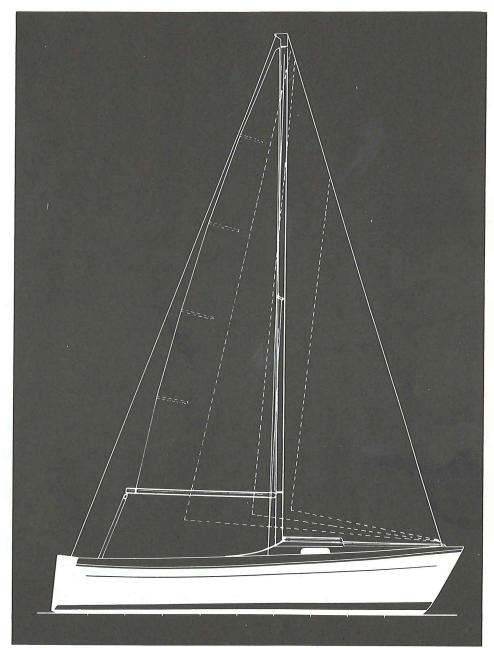
It's also why Roy has such a fine fix on what the largest and most fast-growing segment of the sailing market wants in the boats he brings forth as head of the sailboat division of Chrysler Marine. For Roy Bacon truly has let research build his boats.

#### Aboard the C-20

The new Chrysler C-20 sloop is a case in point. Take spinnakers. I have a healthy respect for them. And I watched with awe as Roy Bacon made one successful landing after another in the diminutive harbor at Quebec's Le Chateau Montebello. The wind was down the Ottawa River so landing under sail meant a downwind run through the narrow entrance, an abrupt 180 round-to, and a luff-to-a-stop at the float.

Roy did it over and over, bringing the C-20 to within a hundred feet of the dock with the spinnaker full, yet dousing the chute, "turtle-ing" it, and never missing that tiny float!

After one successful landing, my wife Judy and I went aboard. "That was some performance, Roy," kudoed my XYL. "And this is some boat!" She doesn't hand out bouquets easily. That's why her unbounded enthusiasm over the C-20 set me thinking: Judy's not a dyed-in-the-wool sailor; she's very much a family-type lady; as a



How do you design a boat for a specific market? Identify the market by complete communications, then build to a profile.

professional photo-journalist she is sensitive to attractive, efficient design in products.

Therefore, if a sensitive, non-sailor, family-type lady is outspoken in praise of a boat and its design features, then other similar ladies might share the enthusiasm.

Perhaps, I mused, the boat might

even have been designed with them in mind. And that, as it turned out, is just so.

It's a natural process of historical evolution, notes Roy Bacon: "Chrysler has a close association with its customers, partly through my participation in shows, regattas, and fleet meetings. During the time I've been with the company, we've sold 10 thousand boats.

"From this association, we gain formal and not-so-formal insight into just what people want from the sailboats they buy, even first-timers. We also have learned to keep an open mind. If we were rigid in our thinking, a lot of new Chrysler sailboats wouldn't exist. And that's exactly the case with our new C-20, too," concluded he.

Roy has looked at the competition and his own boats to see what's happening in the sailboat market. It was the C-26, for example, that brought about the C-20. Customers for a smaller boat than the 26 footer still wanted a large cockpit, standing headroom, a somewhat-enclosed toilet compartment. Roy became persuaded that many of these prospects for a smaller boat would buy from Chrysler if the boat had those three features.

Buying is the key word if dealers also are to become enthusiastic about a boat. Naturally a company has to build a line of good boats, engineering them for production, says Bacon; but it also has to tailor them to the capabilities of its dealer network in market penetration and selling. To meet a price ceiling, many competitive 20 footers, Roy cited, have a minimum of features. If you're going to have both price and features (as the C-20 has), the need for those features has to be established while the marketability of the boat has to be thought through thoroughly.

Roy Bacon told Judy and me that Chrysler did a surprisingly accurate pre-design product profile which helped to pinpoint the great wealth of details, features, and general performance characteristic areas needed. The results of that research, and the application of information to the creation of features in the C-20, is detailed in the special section accompanying this article.

Suffice it to say that there were



approximately thirty different design attributes that the new boat would need to have in four attribute-areas.

Since the boat was to be of special interest to new-to sailing buyers, their wishes were considered above all. Of the four performance areas, to these buyers, comfort was most important; half the attributes were in this area. Sailing ability came next with a third of the total attributes. Trailer ability came third with 10% of the attributes. Last was safety with 6.6% of the performance attributes.

Almost as important as the particular feature-needs, Roy feels, is the comparison of them against a known factor. After all, new-to-boating buyers and owners have no prior boat experience against which to compare.

Therefore, to produce a successful model in this first-time market, a boat company has to make a boat look good, work smoothly, operate comfortably, have "creature comforts."

The company, Roy is positive, which can build such a boat has "a better achievement potential," not only for immediate sales of the particular boat, but also for later sales of other, larger models.

"There is a lot of product loyalty among sailors," Bacon asserts. "It's too easy for a beginning sailor to buy a clunker, but after between one to three months (in the first season anyway—dk) he realizes what a dud he has.

"Chrysler builds a boat, the value of which increases. This becomes increasingly evident to the new owner the longer he stays in boating.

"When, therefore, he moves up to something new, that product loyalty comes to the fore; he wants to buy a boat from the same line as his first boat if it's been any good. Chrysler, for instance, was losing a lot of its good daysailing customers because of a hole in the line which we hope has now been filled by the C-20."

#### THE CHRYSLER C-20 "MATCH A FEATURE" GAME

Below are a list of the design and performance attributes that first-time boat buyers told Chrysler's Roy Bacon were important to them. At the right, you will see another list of actual product features aboard the new C-20 first-timer's boat. See how many attributes and features you can match.

#### Attributes in the area of COMFORT

- 1. Large cockpit; size of a 40-footer
- 2. Easy sail rigging for one person
- 3. Adequate sleeping and ventilation for at least two; possible for weekending four or more
- 4. Stability for cruising comfort
- 5. Toilet option with privacy
- 6. Cabin window option
- Bunk cushion option
- 8. Standing head room in cuddy cabin
- 9. No engine noise or fuel odor actually in the
- 10. Good visibility over the cabin top; crew and helmsman to sit in the boat, not on it
- 11. Table for dining
- 12. Stove option
- 13. Adjustable boom height to clear heads while sitting in cockpit
- 14. Location for ice chest option
- 15. Full draining cockpit sole and seats to eliminate sitting or standing in the water

#### In the area of SAILING ABILITY

- 16. Able to sail in small lakes
- 17. Able to sail in coastal waters18. Good performance on all points of sail19. Shoal draft
- 20. Stiffness
- 21. A big-boat type of rig
- 22. Light helm balance
- 23. Optional motor mount with ability to tilt motor out of water under sail
- 24. Best grades of hardware
- 25. Complete roster of sail control and handling appliances for top all-around performance

#### In the area of TRAILERABILITY

- 26. Must be trailerable
- 27. Wide beam for stability on trailer
- 28. Easy raising and lowering of mast for trailering

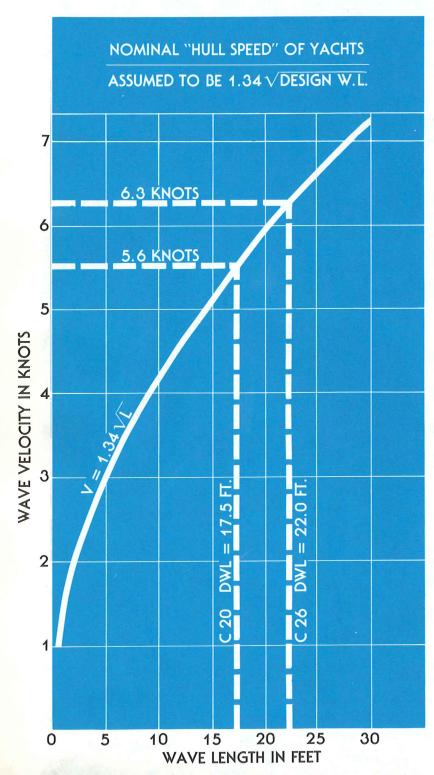
#### In the area of SAFETY

- 29. Non-skid deck and cockpit surfaces
- 30. Unsinkability combined with self-righting, self-rescuing features

#### C-20 Product Features

- A. Well designed hull from the board of Halsey Herreshoff
- B. Day-cruising 10 ft. 6 in. cockpit
- C. Overnighting 9 ft. 6 in. cabin
- D. BIA capacity rating for 1250 lb
- E. Ballasted swing keel for shallow draft, good windward ability, self-righting and rescuing
- F. Mast stepped inside cabin entrance
- G. Over-strength stays; full masthead fore-triangle
- H. Retractable rudder with large blade
- I. Full 8 ft. beam
- J. Vee-berth for two forward
- K. Two 8 ft. quarter berths
- L. Optional bunk cushions
- M. Optional head with curtain to screen off user from cockpit
- N. 34 by 32 in. hatch slides completely forward to bow for headroom and ventilation
- O. Table rigs in cockpit even while boat is sailing
- P. Molded gas tank stowage does not open into cabin area
- Q. Deep cockpit sides and seats
- R. Non-skid surfaces on seats, foredeck, side decks, and cockpit
- S. High aspect ratio sail rig
- T. Stove option mounts to under side of fore-berth filler panel
- U. Sliding stainless gooseneck
- V. Optional outboard motor mount swings up out of use
- W. Cunningham, boom vang, full out- and downhaul adjustments
- X. Full draining cockpit surfaces
- Y. Optional seat cushions
- Z. Optional cabin windows
- AA. Aft cabin bulkhead slopes for comfortable sitting in cockpit
- AB. Ice chest locations to port/starboard of mast for best weight distribution
- AC. Extra-wide cabin entry way
- AD. Stainless steel bow-eye for trailer loading
- AE. Sails come standard with boat





#### "HULL SPEED" OF OUR CHRYSLER YACHTS

The much used term "Hull Speed" needs clarification. It is not an absolute limit of speed; for, with addition of further power, a yacht's speed can always be increased. Rather, "Hull Speed" is an approximate value of speed to indicate where the curve of resistance vs. speed becomes steep. Hence, the majority of sailing or powering will be at a speed equal or less than the "Hull Speed".

This all comes about from the fact that any ocean surface wave has a set relation between its length and speed, which is:

Speed in knots = 1.34 times  $\sqrt{\text{length}}$  in feet

This relationship applies to any deep water wave in any circumstance. Thus, the waves generated by a boat in motion follow this law. At low speeds, there are many little waves generated along the hull. When the yacht speed is  $1.34\,\mathrm{V}$  its length, a single wave appears to span the interval between bow and stern. At higher speeds, the wave is longer and the hull is seen to be seemingly climbing the front of the wave with no longer a boost from the back of the wave against the boat's stern.

Hence, a simple consideration of gravity suggests the need for high power in the latter case. In fact, the rate of power or of hull resistance increases ever more steeply beyond a running condition where waterline length and running wave length are equal. Thus, the term "Hull Speed", for such a rate of speed does have significance, even if not the exact meaning attached to it.

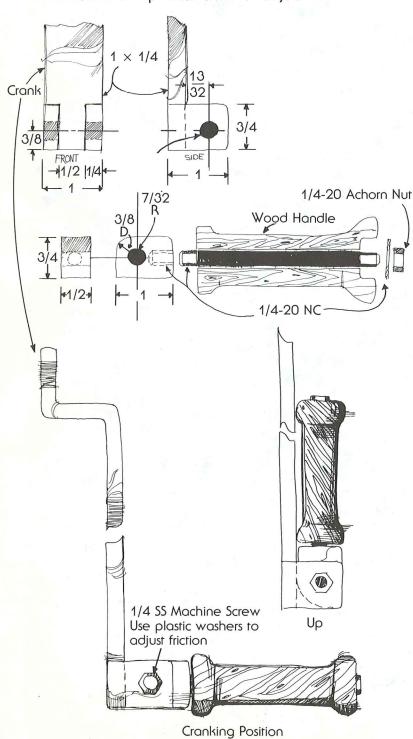
The attached curve of the speed wave relationship includes points for Chrysler yachts. The speeds given can be exceeded, but considerable power is required.

Reference might be made to an article on this and other matters that I wrote for the January 1970 "Yachting" magazine.

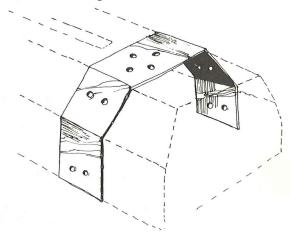
Halsey C. Herreschoff

# and Tips

#### Center Board Fold-Up Winch Crank for Chrysler 26



#### Jam Cleat Mounting Bracket for Buccaneers



Main sheet jam cleat fitting location
Reinforcing plate for rear of center board trunk. (As used on Champion of Champions—Buccaneers.)
Trunk top has to be removed to fit this underneath.

Keel Pennant Plug



Fit a rubber bung/cork into top of keel pennant tube and fix with a pipe clamp to prevent water gushing out. Mike Scott, Detroit

Kits and/or information on the Buccaneer Mast Step Hinge modification shown in the Summer 1977 Crew's Nest can be obtained from:

Ken T Sailboats 5785 South Blvd. Boardman, Ohio 44512 (216) 788-7782

# Reefing from the fail maker ....

#### REEFING THE MAIN

The primary reason for reefing is to limit the amount of heeling moment (20 degree maximum) and attendant weather helm.

There are two methods of mainsail reefing, jiffy reefing and roller furling. We prefer the jiffy reef. It is faster and lends itself to more efficient sails shape.

#### How to Install a Jiffy Reef

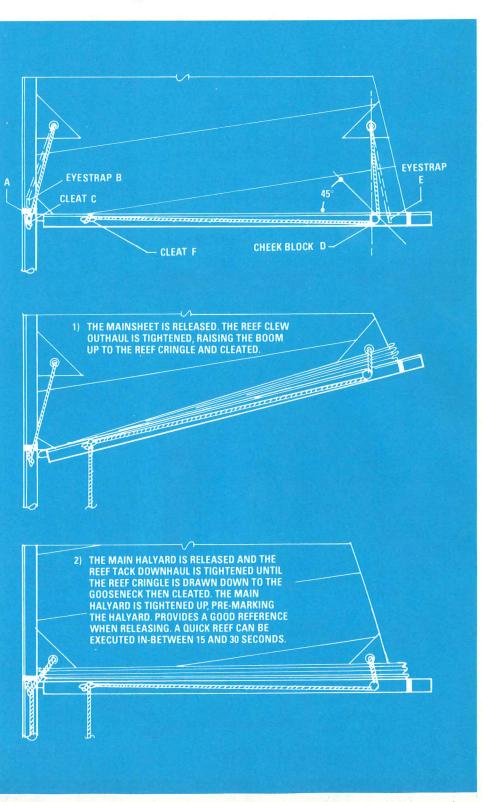
Installation

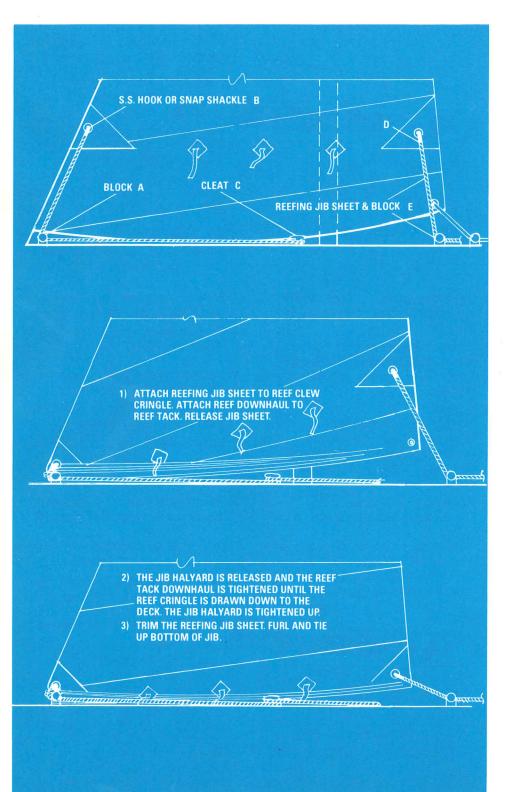
Follow these steps in conjunction with the diagrams.

- 1. Position the boom at or slightly below black band (A).
- Attach eye strap (B) at or slightly below black band (A) on the port side of the mast, angled toward the reef.
- Attach cleat (C) at or below black band (A) on the starboard side of the mast.
- Attach cheek block (D) near end of boom on the starboard side.
   See diagram for exact positioning.
- Attach eye strap (E) on port side of boom approximately 4" aft of cheek block (D).
- Attach cleat (F) just aft of the gooseneck on starboard side of boom.
- 7. The clew outhaul and tack downhaul reefing lines are now reeved into position as shown in the diagrams. Lengths are determined as follows:

Tack Downhaul—Two times the depth of the reef plus approximately 3 extra feet.

Clew Downhaul—Two times the reef depth plus the length of the boom.





#### REEFING THE GENOA

Many people confuse roller furling as a means of reefing. True, some reduction in sail area may be effected through the use of roller furling gear but generally a Genoa will not trim properly when a substantial amount of sail is furled.

Genoa reefing is a means of reducing sail area and at the same time providing proper sheeting angle for an efficient sail shape. Basically the principle for Genoa reefing is the same as jiffy reefing on the mainsail.

A set of reef points including a secondary tack and clew cringle is installed in the Genoa. As the wind increases, the halyard is eased and the reef tack is lowered to the reef position. The sheet is then attached to the reef clew fitting. The excess sail area at the foot is then furled and tied.

Two important considerations on the furling Genoa are: one, the Genoa must be somewhat heavier (one ounce) than the standard Genoa because it will be used in heavier wind ranges when reefed: two, a reefing Genoa will reduce your headsail area by a maximum of 20%, i.e., 150% Genoa reduces to 130%. So, when you plan to install reefing in your Genoa keep in mind you will need heavier sail cloth and that the maximum reduction of area will be 20%.

### How to Install a Jiffy Genoa Reef Installation

- Install a block (A) as close as possible to the regular jib tack fitting.
- Lead a line (with a hook or snareshackle attached to the reef tack) (B) through the block (A) and aft to a cleat (C) installed at the base of the mast.
- An extra jib sheet (D) should be used for the reefing sheet.
   Making it possible to pre-set the reefed jib lead position (E).

# Caring for your

By H. F. Zink, National Service Manager, Chrysler Marine Products

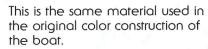
In the last issue of the Crew's Nest, we discussed routine maintenance of your fiberglass boat. We will now progress to the actual repair of damage that can occur under normal use, such as scraping a dock, trailer, or gravel and rocks.

Before deciding to make a repair yourself, you should consider the type of damage, which can be broken into several categories.

- 1. Minor damage
  - a. Damage that penetrates only into the gel coat or outer layer of the boat, such as nicks or scratches.
  - b. Damage that penetrates through the gel coat and partially into the fiberglass underneath, such as deep scratches or gouges. (see figure #1).
- Major damage—such as holes or fractures which penetrate completely through the laminate. This type of damage is best handled by an experienced fiberglass repairman because of its effect on the basic structural strength of the boat. This type of repair requires the addition of reinforcing materials and many times this must be accomplished by a technique called blind patching where there is no access behind the patch. (see figure #2).

For the purpose of this discussion, we will concentrate on the two types of minor damage only. To assist in making minor repairs, Chrysler Boat Corporation offers through its dealers a gel coat repair kit to match all colors used in the manufacture of Chrysler boats. This kit, which contains all the necessary material to complete the repair, consists of the following items:

Gel Coat (same color as the boat)



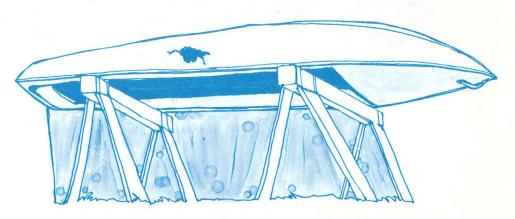
- Catalyst (hardener)
   Mixing this chemical with the gel coat causes the gel coat to harden.
- Cabisol
   Cabisol is a powderlike,
   fiberglass-based material. In repairs, it is used to strengthen and thicken the gel coat and catalyst mixture.
- Rubbing Compound This finishing material is used to

blend a repaired area into the surrounding undamaged surface.

 Tongue Depressors, Paper Cups and Sandpaper

In addition to the above, you will need certain other items:

- A power drill with a burr bit and disc sanding attachment
- Putty knife
- Clean, dry rags
- Acetone
- And, last but not least, a warm, dry place to work. Gel coat will



### AND REPAIRS

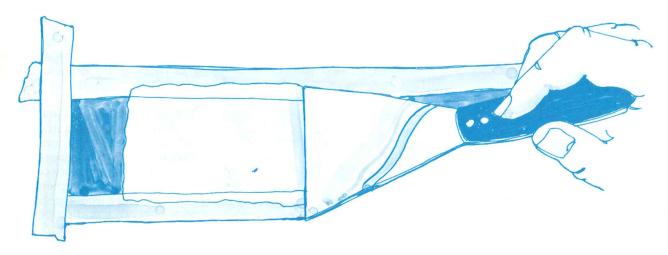
# Fiberglass Hull

not harden or cure well at temperatures below 65 degrees F. Too much humidity will slow down curing. You should make outdoor repairs only when the humidity is low. For indoor repairs on damp, high humidity days use a heater, heat lamp or hair dryer to keep the air as dry as possible.

For your own safety and comfort always wear a dust mask and goggles when sanding or grinding fiberglass. This can be a dusty operation and the safety equipment will help you to keep from breathing the dust or getting it in your eyes. Cabisol in the resin will help to keep the patch from shrinking and will also strengthen the patch.

Mix enough gel coat and Cabisol to fill the gouge. Then add the amount of catalyst specified in the instruction on the back of the container. Mix the catalyst into the Cabisol gel coat mixture with a chopping motion. Remember that the catalyst hardens the gel coat. Once you have added it, you will have less than 15 minutes working time before the mixture begins to cure.

Using your putty knife, work the filler mixture into the gouge. Make sure to extend the patch slightly beyond



### REPAIRING MINOR DAMAGE TO GEL COAT AND FIBERGLASS

To repair minor damage that has penetrated through the gel coat and into the fiberglass, follow the procedures listed below.

These simple procedures, if followed carefully, can result in professional looking repairs and help keep your boat looking "showroom" new.

The first step in any fiberglass repair procedure is to clean the inside and outside surfaces of the damaged area with acetone. This will remove any wax, silicone, or oils which could hinder the bonding of the repair materials.

Using a burr bit on the power drill, round out the gouge or crack and feather back the edges slightly beyond the damaged portion. Be sure you remove all weakened edge particles. If the damage covers a large area, a disc sander will prove more satisfactory for smoothing the rough edges. Remember, when sanding, wear your dust mask and goggles to protect yourself from the dust of sanding.

When you have finished sanding, wipe the repair area with a clean, dry rag.

Next, mix equal amounts of gel coat and Cabisol in a paper cup. The

the damaged area and approximately 1/16" above the original panel surface. As a guide to the desired thickness, put several layers of masking tape on each side of the repair area. (see figure #3). Fill the gouge completely, making sure there are no air bubbles in the patch. If air bubbles do occur, puncture them with your putty knife.

When the patch has cured completely (about 30-60 minutes), sand the patch to re-establish the original contour of the damaged area. You will notice that sanding will bring out any low spots in the patch.