

Maintenance Guide



From the editors of
Boating World magazine

Sponsored by

3M MARINE

Fast. Professional. Results.

WOW



An exceptionally long-lasting high-gloss finish. Superior protection from damaging ultraviolet rays. And a money-back guarantee if you're not completely impressed. What's not to wow about?

Find out how to give your boat an exclamation point at
www.3M.com/Marine.

Fast. Professional. Results.

CONTENTS



Cleaning

04

Restoring

07

Protection

12

Repairs

13

Painting

16



Published by Trans World Publishing Inc.

© 2006 *Boating World*. All rights reserved. 2100 Powers Ferry Rd., Atlanta, GA 30339

(770) 955-5656 Fax (770) 952-0669 www.boatingworldonline.com

To subscribe, visit www.boatingworldonline.com or call (770) 955-5656.

Properly maintaining your boat protects your investment and helps keep it looking new longer. There are many reasons for performing your own boat maintenance, but the best reasons are the time and money you will save.

Cleaning and repairing are not that difficult. Using the right tools and supplies for the job, boat maintenance can be accomplished relatively quickly, allowing you to spend more time enjoying your boat with family and friends.

Bringing your boat back to peak condition is best accomplished by breaking tasks into manageable pieces and using quality products.

3M offers a complete line of marine products that work in harmony with each other and are specifically formulated for the demanding marine environment. 3M marine products provide professional results that will save you time — and money — in the long run.



CLEANING

Before sprucing up your boat's appearance, make sure it's clean — and not just soap-and-water clean. You can apply all the best waxes and protectors, but if the fiberglass, gelcoat, paint or aluminum surfaces aren't squeaky clean to begin with, your boat will never look its best.

Your boat's surface also must be clean before you perform gelcoat work, fix cracks or even add or replace hardware. A surface clean of all wax and dirt results in a truer color that will better match paint or gelcoat.

If you will be adding or replacing hardware, make sure you clean well before doing these tasks, as the

sealant won't adhere properly to a dirty surface.

Washing The Boat's Surface

Begin the cleaning process by using soap and water —



but not just any soap. Household detergent can harm many boat surfaces, as well as the environment. Household soaps may appear to do an adequate job, but your boat's finish can become oxidized in a matter of weeks.

Begin washing your boat with 3M™ Marine Boat Soap. This versatile product features a concentrated formula that quickly cleans the hull, decks, carpet, canvas — even the engines. Just mix with water to achieve the desired cleaning strength.

Removing Black Streaks

It is especially difficult to remove black streaks because water — mixed with sea spray and dirt — is constantly channeled down the same place on the boat. Regardless of whether the water is from a rainstorm or overnight condensation, dirt and grime are usually concentrated in one or two areas, causing the streaks.

Boat soap will do a good job of removing many of those unsightly black



streaks. However, it takes an extra-strong cleaner to remove stubborn streaks.

Don't waste time scrubbing those unsightly streaks. Use 3M™ Marine Black Streak Remover. This product is specifically formulated to quickly clean tough streaks without harming your boat's surface. Black streak remover is strong, yet safe to use on fiberglass, metal and painted surfaces. It attacks the streak without leaving a residue or making it obvious where you wiped the streak away.



Cleaning The Hull And Deck

Once you have completed washing the boat, there may still be work to do on the hull. 3M™ Marine Boat Wash is an excellent choice to use on the tough stuff — algae, grime, oil, fish blood and dirt. Boat Wash is also ideal for cleaning fiberglass, metal and painted surfaces. This cleaner can be used at the waterline to remove slime and stains that other cleaners cannot remove.

Choosing The Right Cloth

The 3M™ Marine High Performance Cleaning Cloth may cost a little more than using an old T-shirt for a cleaning rag, but it's more effective. Its unique bi-component microfibers and knit construction provide excellent dust, water and oil pickup. The cloth may be used dry or damp, with or without cleaning chemicals.

The high-performance cloth is terrific for removing solvents, dust and abrasive residues, waxes and finger-

prints. When the cloth is dirty, just throw it in the washing machine. It can be

used hundreds of times. Now your boat's surface is truly clean.

WASHING A NON-SKID DECK

One of the toughest places to clean on a boat is the non-skid surface area. Most newer boats incorporate a liberal amount of non-skid surfaces to prevent slipping and falling into the water.

Cleaning these areas is another job for a heavy-duty cleaner. Non-skid surfaces feature high-friction textured material that traps dirt and grime, and can be difficult to remove. If the non-skid material is in a high-traffic zone, the dirt can be ground-in, which reduces the effectiveness of the non-skid surface.

Do not use household cleaners on non-skid surfaces because they may contain wax that will make the non-skid surface slippery. Household cleaners can also damage the gelcoat.

3M™ Marine Non-Skid Cleaner is a tough, effective cleaner that features a unique chemical formula for fast results. It



cleans hard-to-reach ground-in dirt and stains on non-skid decks. Yet it's safe to use on fiberglass, metal and painted surfaces. Just pour it on, brush it in, and rinse thoroughly with clean water, and you are ready to go.



RESTORING

Time, weather, sun and salt all take their toll on a boat's surface. Despite your best efforts, your boat's "new look" finish will eventually fade.

Fortunately, there are a variety of 3M products available to restore a boat's finish, depending on the amount of oxidation that has occurred.

The best way to remove oxidation and restore shine is to "buff-out" your boat. Done correctly, and with the right compounds, glazes and waxes, you'll bring the life back to your boat's appearance.

Removing Heavy Oxidation

3M™ Marine Rubbing Compound is extremely aggressive and will cut through the worst oxidation. Apply with a 3M™ Marine Superbuff™ Pad for professional results. Do not leave the buffing pad in one spot for too long, or you may damage the paint or gelcoat.

Marine rubbing compound clings to paint and gelcoat surfaces so the buffing action can do its job.



The unique compound remains wet on the surface, yet there is little or no mess. Before beginning, practice with a buffer to avoid burning the paint or gelcoat, or leaving deep swirl marks.

Remember, every time you buff your boat, you remove a little more material. Eventually, you'll take the paint off or seriously thin the gelcoat if you are not careful.

Removing Minor Scratches And Returning The Boat's Shine

Apply 3M™ Marine Finesse-It™ II Glaze after using 3M™ Marine



Rubbing Compound. It is formulated to remove swirl marks and scratches in the finish, as well as bring the finish up to a high-gloss "wet" look. If you got a lit-

tle carried away with the buffer in the previous step, just apply Finesse-It II Glaze to smooth things out.

As a final step, apply 3M™ Scotchgard™ Marine Liquid Wax, 3M™ Marine Ultra Performance Paste Wax or 3M™ Marine Liquid Wax to provide UV protection from the sun's damaging rays.

One-Step Process (Heavy Oxidation)

3M™ Marine Restorer and Wax is designed to remove



heavy oxidation, chalking, fading, minor scratches, rust and exhaust stains.

Simultaneously, it leaves behind a hard coat of wax that protects the finish from further oxidation.

Using this 3M product combines two steps and helps you finish the job faster.

One-Step Process (Light Oxidation)

3M™ Marine Cleaner and Wax removes light oxidation and also provides a just-waxed finish. It works well for newer boats that do not have heavy oxidation. It is effective on small rust spots or stains when you don't



want to use a heavy-duty fiberglass cleaner on a rag, and buff out the spot. Then, wipe it off with a dry cloth. The spot is gone, but the wax finish remains.

To resurrect the gloss in gelcoat, use 3M™ Color/Gloss Restorer. This compound/polish combines



an exceptionally fast-cutting compound with a finishing material in one. It removes light to heavy oxidation, scratches, stains, blemishes, and fine swirl marks. Follow up with Scotchgard™ Marine Liquid Wax or 3M™ Marine Liquid Wax to maintain the gloss.

Restoring And Polishing Metals

By now your boat is buffed and sparkling. However, a quick glance reveals that the metal needs some attention. Time to use 3M™ Marine Metal Restorer and Polish. It restores and polishes stainless steel, brass, bronze, copper and chrome, by removing rust, oxidation and tarnish.

Use marine metal restorer and polish to wipe down the cleats on your boat, and not only will they look good, but handling lines on the cleats will be easier when the surface is clean.

Mariners who own aluminum boats can use 3M™



Marine Aluminum Restorer and Polish to restore bare

RESTORING DULL VINYL

When the outside of the boat is looking good, the seating and cushions could probably use some extra care. A quick wipe with 3M™ Marine Vinyl Cleaner and Restorer, and you'll think you just got a new interior. It really

cleans well, plus it has a fresh lemon scent. Follow up with 3M™ Marine Vinyl Conditioner and Protector. This product protects vinyl, rubber and plastic surfaces from the harsh marine environment.



aluminum's shine and patina. Aluminum is difficult to maintain, especially in a harsh salt environment. However, aluminum restorer and polish will keep it

looking good longer. Do not use this product on any anodized aluminum surfaces, or the abrasive material will remove the anodized coating.



You're having dinner with your friends on their boat, when suddenly it hits you that their boat looks brand new even though it is older than yours. Later you ask your friend what his secret is to keeping his boat looking so new. He smiles and proceeds to tell you about all of the great products from 3M.

3M Marine makes products that protect, maintain, or repair your boat so that you can continue to take pride in its appearance.

3M Marine brings innovative solutions to all your boating needs. We understand that your boat is much more than just an investment. It's your pride and joy. Our unique products and systems are designed to keep your boat ship shape.

For more information, call 1-877-3M-Marine (that's 1-877-366-2746), or visit our Web site at www.3M.com/Marine

3M *Innovation*

PROTECTION

Your boat is now looking showroom new and ready for another year on the water. You have put in a lot of hard work — and it shows. But how are you going to keep it looking good?

While it may be tempting to simply grab a can of wax at the auto parts store, resist that temptation. Automotive waxes are good for what they were designed for — your car or truck — but they are not formulated to work like marine protectors. Using the right product for the job delivers fast, professional-looking results.

Marine products tend to be a little more expensive, but consider what you paid for your boat. Your boat is an investment, and it deserves the right products. When it comes to protecting your boat, you want the best products available.

Fiberglass/Gelcoat Protection

There has never been a marine wax quite like this before. 3M's new Scotchgard™ Marine Liquid Wax is formulated to provide an exceptionally high gloss with unmatched durability



that lasts and lasts. The unique chemistry provides protection from the sun's damaging ultraviolet rays, and is safe to use on fiberglass/gelcoat, marine top-side plants, painted aluminum and marine metal parts. The special formulation uses reactive chemistry, which actually bonds to the boat's surface. Scotchgard™ Marine Liquid Wax has a pleasant tropical scent.

3M™ Marine Liquid Wax is easy to apply and is



designed to give your boat's surface a high-gloss shine. 3M™ Marine Liquid Wax also leaves a protective coating. This wax has a unique formula that chemically bonds to your boat's surface and retards UV damage.

Traditional paste wax is difficult to apply and wipe off, but the coat it leaves behind is worth the extra work. 3M™ Marine Ultra Performance Paste Wax contains easy-to-apply wax polymers that provide immediate and long-lasting water repellency. The result is a high-gloss protective finish that retards oxidation and sunlight damage.

To give your boat that just-waxed look and feel, use 3M™ Marine Clean and Shine Wax on your boat. To save time, this product can even be sprayed on your boat while it's still wet so you can get back to having fun.

Surface Protection

Mold and mildew grow quickly in a marine environment and do more than just smell terrible; they can actually deteriorate fabric surfaces and cause allergic reactions.

Easy to use ... simply spray it on, allow to penetrate, and wipe clean. 3M™ Marine Mildew Stain Remover works on most marine surfaces including seat cushions, covers, vinyl windows, gelcoat, deck furniture, rub rails, showers, and more! The fast-acting formula penetrates tough-to-clean mildew stains and dirt. It is also thick enough to use on vertical surfaces such as seat backs. Test for suitability as the formulation does contain bleach and will discolor some surfaces.

3M™ Marine Mildew Block is designed to prevent mildew growth. The pat-



ented nontoxic formula forms an invisible barrier that prevents mildew growth.

The handy spray-on applicator makes it easy to protect most marine surfaces and keep them looking cleaner and newer longer. This versatile product is perfect to use on boat covers, sails, bathroom surfaces, deck furniture and more.

REPAIRS

When you need to add equipment or hardware, or repair damage, you will need to clean the repair area. After cleaning, you need to

seal it with a good sealant. It is very important to use the right sealant in order to protect your boat from water intrusion.

If you use the wrong sealant or the surface has not been properly prepared, moisture can enter into and under the item you are installing. This will eventually rot the material underneath and result in expensive repairs.

3M has long been recognized for its world-class adhesive technologies and expertise. They offer several marine-grade adhesives for different applications. It's a good idea to always have a couple of these adhesives on your boat (see sidebar on page 18).

Installing Through-Hull Fittings

3M™ Marine Adhesive Sealant 5200 is the industry benchmark and one of the toughest sealants available. This high-strength, permanent adhesive should be used in applications where you don't plan to remove the item; you will have a difficult time removing it.

3M™ Marine Adhesive

Sealant 5200 is a high-performance polyurethane adhesive/sealant that becomes tack-free in 48 hours and completely cures in five to seven days. This adhesive stays flexible, holds its strength above or below the waterline, and resists salt water and



weathering. However, do not use this adhesive product on hatches or other items that may be removed in the future.

Because of the strength of Adhesive Sealant 5200, use a thin film of it behind

hinge plates that have marginal screw strength. This product has high strength, shock and vibration values. 5200 will help prevent the screws from elongating and also keeps the hinge plate in place.

When time is critical and you need a fast, long-term seal above or below the waterline, use 3M™ Marine Adhesive Sealant Fast Cure 5200. It becomes tack-free in one hour and completely cures within 24 hours. This adhesive is ideal for applications that need some flexibility.

Installing Hardware

For some hardware installation projects, you will want to select a product that is strong but allows for future disassembly. 3M has several products that fit this description. If you are looking to seal hatches, hinges, portholes, navigation lights or deck hardware, 3M™ Marine Sealant Fast Cure 4000 UV is a great choice.

Marine Sealant Fast Cure 4000 UV is an outstanding cosmetic sealant for topside applications. It



is UV-resistant and won't yellow with time. Its flexibility allows for the dissipation of stress caused by shock, vibration, swelling or shrinking. It's exceptional at bonding to metal and can be used above or below the waterline.

3M™ Marine Adhesive Sealant Fast Cure 4200 is an excellent choice for projects such as sealing access plates and stern joints. It forms a watertight, weather-resistant seal on joints and boat hardware. Approximately half the strength of 3M™ Adhesive



Sealant 5200, it allows for future disassembly of parts and can be used above and below the waterline. It's a good all-around adhesive/sealant product to have in your boat repair kit.

Semi-Structural Repairs

For semi-structural repairs above and below the waterline, use 3M™ Marine High Strength Repair Filler. Its unique formulation features short strand fiberglass. This high-performance reinforced filler can be used to repair fiber-glass hulls, decks and

other parts. Just fill holes to slightly below the surface of the surrounding area. Then

use 3M™ Marine Premium Filler work before sanding.



CABIN AND TRIM SEALING

3M™ Marine Silicone Sealant is among the most widely used sealants on the market today. It is ideal for sealing trim, hatches, drip rails, sinks, heads and more. Marine grade silicone sealant is mildew-resistant and remains flexible after curing. It will adhere to almost any clean, oil-free surface.



PAINTING

Painting the bottom of your boat is not difficult; however, it is a dirty job. And if you do not protect your body and the immediate environment, it can be hazardous. Therefore, you need the proper equipment, supplies and paint to perform a good bottom paint job that will last.

Surface Prep

Like other boat-maintenance tasks, it is important to make sure the surface you are working on is clean. Use 3M™ Marine Boat Wash to clean the hull as soon as it's out of the water. Remove any sea grass, barnacles or any other particles.

Thorough surface preparation is the key to success with all paint jobs. Before you remove the old paint, mask off the boot stripes to prevent your sander from wandering into a boot stripe. This will prevent having to repaint the boot stripe. One of the best products for this task is 3M™ Marine Heavy Duty Protection Tape #346.

Another good option is to use multiple layers of Scotch® Blue Painter's Tape



#2090. Both options will protect the surface and remove easily without leaving any adhesive residue.

Sanding The Bottom Paint

Now you are ready for the messy work — sanding off the old bottom paint. 3M recommends using a 24- or 36-grit sanding disc. The sanding process will take some time, depending on the size of your boat and the amount of paint build-up.

Make sure you wear the proper gear when sanding the bottom paint. The chemicals you use are toxic, and, if inhaled, may cause severe health problems. Use a government-approved respirator. 3M sells a wide range of respirators for various applications. Make sure the respira-

tory you select is appropriate for the job and fits your face correctly.

In addition, wear eye and ear protection, and a full body suit — you don't want your skin to breathe in the dust. In fact, in some areas, you may need to tent or bag the entire boat before starting. You can use 3M™ Masking Film or heavy plas-



tic, and secure it with 3M™ Preservation Tape #481.

Applying Paint

Except for the type of paint being applied, topside painting is similar to painting the bottom. The same principals

MASKING

Mask off areas where you don't want paint. You may want to get creative and paint some new stripes with the tape. With so many different masking tape types and sizes, you can create just about any design you want.

When you take on a project like this, you're effectively performing a complete detail of your boat. It's time consuming, but having all the supplies on hand before getting started makes the job that much easier and faster. As you go through the list of tasks, simply choose the products that do the best job.

Because the effects of sunlight on adhesive varies between different tapes, for overall masking select the tape depending on how long you plan to leave it on the surface, and whether you plan to use it indoors or outdoors. Other considerations include the type of paint you plan to apply.

For example, Scotch® Blue Painter's Tape #2090 is a masking tape that is UV-resistant and can be left on a surface indoors or outdoors for up to 14 days, yet removes cleanly. Scotch® Blue Painter's Tape #2080

removes cleanly for up to 60 days and leaves sharp, crisp lines.

Scotch® Masking Tape #256 can be left on a surface indoors for up to five days, yet it removes cleanly; and Scotch® Performance Masking Tape #233+ can be left on an indoor surface for up to 24 hours.

These time limits help determine how easy the masking tape will be to remove. If you leave any masking tape on a surface too long — especially in sunlight — the adhesive may be difficult to remove. Remember, the longer the recommended duration of use, the more expensive the tape is. Resist the temptation to use the less expensive tapes for long periods, or you'll pay a price in time spent trying to remove it without damaging the surface.



apply to the preparation, masking and priming. For optimal results, always follow the paint manufacturer's recommendations.

Generally, apply the primer, and let it dry. Then, sand the surface with a 3M™ Imperial™ Hookit™ II Dust-Free Film Disc (P220-P400). Because any paint can be hazardous, use the same types of protective gear and precautions you used when you painted the bottom of your boat.

Conclusion

Congratulations on a job well done. You've been persistent, and hopefully you've used the right products for the job at each step. Your boat is now sparkling clean, freshly repaired and as ready as ever for the water.

As you can see by the descriptions of these progressive boat-maintenance tasks — along with the optimal products for each — 3M manufactures a product series that works perfectly in the marine environment and provides professional results. And while the whole process has taken some time, using high-quality 3M products has mini-

"MUST HAVE" 3M PRODUCTS

Here's a short list of 3M products that every boat owner should consider keeping on hand for quick cleaning and repair situations. You'll be surprised how often you can use these products — and how much easier they'll make your life.

- 3M™ Marine Boat Soap
- 3M™ Marine Cleaner and Wax
- 3M™ Marine Vinyl Cleaner and Protector
- 3M™ Marine Adhesive Sealant 5200
- 3M™ Marine Adhesive Sealant 4000 UV
- 3M™ Marine Liquid Wax
- Scotchgard™ Marine Liquid Wax
- 3M™ Marine Color/Gloss Restorer
- 3M™ Marine Mildew Block
- 3M™ Marine Mildew Stain Remover
- 3M™ Marine High Performance Cleaning Cloth
- 3M™ Marine Silicone Sealant
- 3M™ Marine Black Streak Remover
- 3M™ Marine Non-Skid Cleaner
- 3M™ Marine Boat Wash
- 3M™ Marine Metal Restorer and Polish
- Scotch® Blue Painter's Tape #2090

mized the amount of time spent on cleaning and maintenance tasks.

The beauty of finding a company that offers a series of maintenance and repair products is that each product helps individual tasks smoothly segue into the

next, until the entire project is done. Now it's time to get out on the water, relax and enjoy your boat with family and friends. Bon voyage!

For more information on 3M Marine products, visit 3M.com/marine, or call (877) 366-2746.

Clean – Restore – Protect



Your boat is your pride and joy.

At 3M Marine we make products that protect, maintain, or restore your boat's appearance so it can continue to be your pride and joy for years to come. Let our products help you get the job done right the first time so you can spend more time enjoying your boat.

For more information visit our website at www.3M.com/Marine or call toll free 1-877-366-2746.

Fast. Professional. Results.

3M Marine



We know how mildew makes you feel.

Mildew is a relentless enemy. Sink it fast with 3M™ Marine Mildew Stain Remover and 3M™ Marine Mildew Block. Our unique, two-tiered approach not only cleans away tough mildew stains easily, but also helps prevent them from coming back. Find out how you can fight less and enjoy boating more at www.3M.com/Marine.

Fast. Professional. Results.

3M is a trademark of 3M.
© 3M 2005. All rights reserved.



3M Marine

60-4400-9475-7