

# LAST ALMOST FOREVER!

**13 STEPS TO HELP YOUR ROWING EQUIPMENT  
LAST AN ETERNITY!**



**A Rigging Consultation  
with Mike Davenport**

Artwork by Peter Martin

*Part of the Max Rigging Series*

## **The Max Rigging Series**

The *Max Rigging Series* is a line of information products based upon the Max Performance concept. That concept focuses on the idea that coaches tend to be able to do their best work when the demands placed upon them are balanced by the resources that they have to use.

Recently I wrote and published the tenth anniversary edition of *The Nuts and Bolts Guide to Rigging*. *Nuts and Bolts* has proven to be the most popular book ever written on the subject of rigging. I have designed this Special Report to carry on where *The Nuts and Bolts Guide to Rigging* leaves off, and it represents one part of a succession of products that make up the *Max Rigging Series*.

With so much new and specialized material constantly appearing on the subjects of rowing and rigging, it has become difficult to keep *Nuts and Bolts* current with all the changes. I intend for the *Max Rigging Series* to fill this void by providing you with the most current, in-depth, and complete information available.

My goal with these reports is to provide you with the best products possible. Please let me know if I have succeeded in that goal. If you do not agree that I have, you may return this report to me for a full refund.

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This Special Report and the *Max Rigging Series* are designed to provide information in regard to the subject of rowing equipment. They suggest many actions to take for proper care and use of rowing equipment; however, they are not and cannot be exhaustive of all necessary actions.

It is not the intent of this report or this series to provide all the information that is available concerning rowing equipment. Every effort has been made to make this report as complete and as accurate as possible. However, there may be mistakes, both typographical and in content. Do not rely solely on this product, my Web site, or any of my other products for guidance.

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A Rigging Consultation  
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## About the Author

Mike Davenport has been involved in the sport of rowing for almost 30 years. He is also a known professional speaker, has traveled around the world coaching and working in sports, and has been around the country (several times) presenting a variety of clinics and seminars on different aspects of coaching, rowing and rigging, the effects of coaching on coaches, and how to excel and thrive in the wild world of sports (W.W.S.).

He has written several books and a wealth of articles on coaching,

rigging, and rowing. His company, SportWork, is the primary educational consultant for USRowing.

Mike was the boatman for the U.S. National Rowing team for several years, including the 1996 U.S. Olympic Rowing Team.

Mike lives in Maryland with his wife, Tracy, and their sons Brook and Ben, and two cats with the biggest paws you have ever seen.

His plans are to work with his partners to help make coaching a better place for coaches.

## AN ETERNITY

How long should new equipment rowing last? Three years? Five years? Longer? Barring any unforeseen tragedies like fire, theft, or a major collision it is not unreasonable to expect brand-new rowing equipment to last 15 to 20 years. That's a lot of hard strokes if you're an average rower—about one million. And that's also a lot of dockings, trips to away races, and wear and tear.

Should you be an optimist and expect your shell to last that long? With a little tender loving care, and using the following advice, the answer to that question is a definite yes!

You don't need to be a mechanical genius to get your rowing equipment to last an eternity (and in rowing 20 years is an eternity), but you will find that some foresight can be very helpful. To assist you I've put together this report, and talked to several experts who have been around rowing for quite some time. With their insight, combined with a little elbow grease here, a little money there, and some planning on your part, you can add years to your equipment's life.

But before we go any further I want to answer one question that I get quite a bit from coaches: "Can older equipment be fast?" I will let the following story told to me by my friend Allen Rosenberg, who coached the 1964 U.S. men's eight to Olympic Gold, answer that.

In 1962 a Russian crew came to Philadelphia to race in the People's Regatta. Not having their own boat, their American guests arranged for them to pick any boat out of all the boathouses along Boathouse Row. They picked one, raced, and won—beating Vesper, several college crews, and the Canadian National Team.

What makes this interesting is that the Vesper boat they beat was the forerunner of the American eight that won the Olympic gold in 1964. What makes this even more interesting is that the boat that the Russians selected and rowed was built in 1947, making it fifteen years old, and it had spent almost all of those fifteen years on the racks, being rowed very seldom.

Allen Rosenberg, who was involved in the coaching of the Vesper eight at the time says,

“The Russians proved that day that old boats can win races.”

And another point about older equipment . . . although there have been changes in rowing equipment over the years, there have been few, if any, significant changes in the equipment over the past one hundred years.

For instance, the hull design of the eight rowed in the men’s events of the 1904 St. Louis Olympic games is probably very similar to the hull of the men’s eight that will be rowed in the

men’s events of the Olympic Games in Athens, Greece, in 2004.

In the following pages, I will focus on the three most common types of rowing equipment, and what steps you can do to help them last.

Almost all of the steps are very simple, involving nothing more than common sense, some elbow grease, and a desire to keep the equipment going strong, for long.

# THE EQUIPMENT

We sure do use a lot of stuff in our sport. There are very few sports that use as much equipment as rowing, and that costs as much. Following is a candid discussion of the equipment we use.

**SHELLS.** To start, let's focus on rowing shells (both sculling and sweep shells).

Basically, a shell consists of four main components. The first component is the hull. A healthy hull is critical—not only does it separate you from the fish below, but its condition makes a big difference in your boat speed. More on that in a moment.

The second component is the superstructure. It gives the boat its strength and rigidity, constructed by different methods depending on the manufacturer. For example, some boats are made with supporting braces throughout the boat, while others may use a monocoque decking system.

Regardless of the method used, the superstructure takes a lot of wear and tear, in fact, every time a stroke is taken there are forces that work against the structure. Therefore it's critical that the boat's structure is maintained, for if it is not the boat will lose its

rigidity and become inefficient to row.

The third component is the riggers. Whether you are rowing standard riggers, Euro-style riggers, or the newer wing riggers, riggers are all essentially the same. They allow the oars to be fixed to the hull to increase the propulsion. Riggers take a lot of abuse, and are often the most abused piece of rowing equipment in the boathouse.

That brings us to the fourth component—the moving parts. They consist of the oarlocks, rudders, tracks, seats—you get the point—anything that moves.

There aren't many moving parts in a shell; however, the ones that are there take the brunt of the wear and tear. And if the wrong two-dollar part wears out then a twenty-thousand-dollar boat may well end up in slings and off the water.

**OARS.** The next - equipment on our radar screen are oars.

Regardless of whether an oar is used for sweep rowing or sculling, it is in essence the same: a long device that attaches to a shell, used to propel the shell.

Oars are very simple in design, and can be viewed as consisting of two parts, those that move, and those that don't. And those parts that do move (collar, and attachment parts for adjustable handles) are designed to move very infrequently, being adjusted only every so often.

Oars are also very tough, some of the toughest equipment in the boathouse, and don't demand too much tender, loving care; however they do require some care to survive and live productive lives.

**ELECTRONICS.** Slowly but surely there is more gadgetry coming into our sport. We not only have voice amplification systems, but now we have speedometers, GPS, and remote sensing to connect between a launch and a shell. Rowing life is becoming more technical.

What that means is that there are now pieces of expensive and fragile electronics that often respond very poorly to wear and tear and submersion at the boathouse. And that also means to keep that equipment alive, a raised level of concern is needed.

**ERGOMETERS (Indoor Rowers).** "Ergs," as they are more

commonly known, are the work-horses of many rowing teams. They often take the hardest work rowers can produce, and receive little care in return, usually with no complaints. That is, until they breakdown.

The most commonly used ergs are made by Concept II. It is really beyond the scope of this report to discuss their care in detail. If you follow the steps listed in the next section you should be okay. However, Concept II has specific care instructions on their Web site at:

[http://www.concept2.com/products/ir/irfaq.asp#\\_Toc455210348](http://www.concept2.com/products/ir/irfaq.asp#_Toc455210348)

**OUTBOARD MOTORS.** Launches and motors are very similar to ergs in that they do a lot of work, and usually only receive any type of care when they break down.

And like ergs, it is beyond the scope of this report to cover in detail all the care steps you should take for your engines. Besides the steps list in the next section I would contact the manufacturer or an outboard mechanic for specific things you can do to get the most from your engines, and to keep them running as long as they possibly can.

## THE 13 STEPS

A plan designed to keep all of your equipment in sound condition will help it be rowed for a very long time. Assuming that you are highly motivated to keep it zipping along, you should realize one fact—there are a horde of things out there waiting to demolish your equipment, ranging from dirt to fire to pollution to buoys to novice rowers.

Following is advice to help you fight off these equipment killers and keep your equipment rowing for an eternity.

### **Step 1: Follow manufacturer's recommendations.**

Without a doubt, this is the number one thing that you can do to insure that you get the most from your equipment. The absolute number one thing.

Yet, most coaches and rowers don't do it. Why? Probably because most rowing equipment is pretty simple in design and concept. Or they are too busy to take time to read the recommendations.

Finding the recommendations to follow is often not difficult, they are usually in an owner's manuals or on Websites. But they often are not read, and that can make a

big difference in how long equipment can last.

For instance, did you know that carbon fiber oars are great conductors of electricity, and should be kept away from electric power sources? Or did you know that you should leave the deck covers on most boats open when the boat is not rowed, to promote drying? Or that you should not allow rowers to sit in slings? Little bits of information like these often go unnoticed, and equipment can suffer.

A few minutes invested in reading the information can go along way. Most of it might be boring or repetitive, but at the same time that investment of a few minutes might well uncover something that will make a big difference. (And also help make the equipment work better!)

### **Step 2: Instruct rowers and coaches on how to use equipment.**

I cannot tell you how often I've seen equipment get broken because someone just didn't know how to use it.

A rower who tries to move his foot stretcher with his feet still in the sneakers, a coxswain who is

*cramming* a CoxBox™ harness connector in, a coach who is tightening a rigger nut so tight that even the incredible Hulk could not loosen it. All these will lead to broken equipment—and all are preventable.

Instruction needs to be given to those who use the equipment. This is especially true when the equipment becomes more complex, such as outboard motors.

Take time to instruct all who use the equipment. The few minutes it takes to show someone how to adjust a foot stretcher, or to connect a CoxBox™, or to tighten a rigger nut can save you countless hours of repair time.

And if you are not sure, read the manual, or call the manufacturer.

### **Step 3: Keep it clean.**

Besides satisfying people who waltz around your boathouse yo-yodeling, “Clean equipment is happy equipment,” there are several benefits to keeping your equipment clean.

The first and foremost is that you’ll probably feel better when you row in a tidy boat. And in most cases the better something looks, the better we take care of it. Yet more importantly, a good cleaning will greatly reduce the wear and tear on any moving parts and protect your hull and oars.

“The best way I’ve seen to keep a boat clean is to work on a schedule,” says Dickie Perelli, past boatman for the collegiate rowing team at Massachusetts Institute of Technology and owner of Still Water Designs.

“Rinsing and wiping down the hull and tracks daily will remove much of the filth,” Perelli adds. In addition, a good wash with soap and water once a week will keep most of the gear-eating grit away.

And this is especially true for the tracks on ergometers—keep them clean and the ergs will not only last longer, but be more fun to row (and scores might just be better).

Included in this cleaning should be oar handles, which should be disinfected on a regular basis, if the oars are shared. Also some attention might need to be given to microphones, such as those on CoxBoxes™. If worried about transmission of colds and the like, headsets can be switched out very easily.

For a plan on scheduling your cleaning, see the upcoming section.

### **Step 4: Tighten fasteners.**

Before each row you need to make sure that all fasteners are tight. Nothing puts wear on boats and oars like rowing under full

pressure when rigger nuts are loose, or an oar collar is slipping. This is really a simple process that usually only takes about five minutes, but it can save you hours of repair time, and a bunch of money.

Have coxswains and/or rowers check each rigger and foot stretcher before launching. The three most important items to check are the rigger nuts and bolts that attach the rigger to the hull, the top-nut or top-bolt of the rigger, and the foot stretcher hardware.

For more information about how tight to tighten your fasteners, check out the free *Tips Page* at [www.maxrigging.com](http://www.maxrigging.com).

### **Step 5: Wax your hull.**

We've already mentioned what a hull does, so how do you help it do its job? During the off-season or training times, wax it. Waxing is a great way to protect your boat's finish.

Waxing will keep the pollution that lurks in the water at bay and greatly reduce the dose of ultraviolets that the hull may get (this is especially vital for those of you who store your boats outside). Use any high quality car or boat wax. Just pick one brand, follow the direction, and stick to it forever.

### **Step 6: Avoid wet sanding.**

Perelli notes this about sanding, "Sanding theoretically increases speed; however, in many years of working with boats I have never noticed any correlation between those who sanded and those who won." One main reason to be wary of sanding is that most boats will need repainting after 2-5 wet sandings.

### **Step 7: Polish the hull.**

Treating the hull once or twice a year with a good polish (rubbing compound) is an excellent way to remove wax and scum build-up. There are several outstanding makes of polish on the market—just be sure you use one with a high grit number (around 1200-1500), and follow the directions.

### **Step 8: Fix it—now!**

One of the keys to keeping older equipment in shape is to make repairs as soon as they are needed. A loose foot stretcher rowed for weeks can cause damage to the structural members that hold it, and could damage the hull. If you row with it loose—waiting to repair it a later date—you very well might be taking months or years off the life of your shell. An oar rowed with a break or significant ding in the spoon can be at risk of further damage.

Now there certainly are quick fixes that you can do that work

well, like a piece of clear tape over a small ding in the hull, or a minor miracle with five-minute epoxy. These fixes can get your boat back on the water quickly; however your boat can suffer greatly if you let those temporary fixes turn into long term ones.

Broken or worn parts, especially in one of the three main areas should be fixed immediately and permanently. “I can’t emphasize enough the importance of not waiting to make repairs,” notes John Wagner, former rowing coach and Waterfront Director at Washington College. “The longer you wait, the greater the potential for serious damage to the boat.”

But what should you do if something is in need of repair and you don’t have the time or skill to fix it? Try contacting a local expert for advice about hulls. Marinas usually know those in the area who are competent with fiberglass work, and metal shops might be able to help you with rigger repairs.

You might also consider some of the firms that will travel and make repairs at your boathouse. Klinger Engineering, in Easthampton, MA is one such company ([www.klingerengineering.com](http://www.klingerengineering.com)).

In regards to oars and electronics, I recommend contacting the manufacturer for specific advice.

But before you have just anyone work on your boat, Wagner offers a word of warning: “A quick fix is good; however, making the repair correctly is critical. A bad repair job can cause more damage and end up costing you money and time. Make sure that the person doing the repair knows what he or she is doing.” With that said, a sound suggestion would be to call the manufacturer, asking for their advice. You should also ask if the problem might be covered under any warranties they offer.

### **Step 9: Watch the lubrication.**

Whenever your boat is rowed, there is a constant battle being waged by the forces of friction against your moving parts. So you’d probably think that you’re helping matters by keeping things well lubricated, right? Nope!

In many instances a good cleaning is better than splashing on a lubricant. In fact, lubricants may actually hasten the wearing process.

Dave Trond, Sales-Service Manager at Vespoli USA ([www.vespoli.com](http://www.vespoli.com)), makes this suggestion: “We have found that it is usually more important to keep things clean instead of keeping them lubed—and this is especially true of the tracks.”

Not using lubrication and keeping parts clean will extend their life;

however, there are a few parts that you should lube. Ball-bearing seats, which come in many of the new shells made today, should be treated. About every three months or so, you should place several drops of a light machine oil on those bearings.

Trond suggests another place to treat are areas where unlike metals are in contact. “Often in a wet environment when unlike metals touch, corrosion occurs,” states Trond. Using an anti-corrosive compound, such as Versachem’s Anti-seize Thread Lubricant, can reduce the corrosion, and extend the life of your parts. Versachem’s and other anti-seize compounds can be found at most auto-part stores or marinas.

Shawn LaRose, from Concept II ([www.concept2.com](http://www.concept2.com)), recommends that you not lubricate the oarlocks or the sleeves of the oars at all. The reason is that the oils or spray used for lubrication can attract and hold dirt. LaRose says, “Those plastic surfaces are fairly frictionless, and using lubricants can speed up their wear due to the dirt the lubricants attract. Keeping them clean will give you the longest use.”

In terms of the electronics, only use lubricants that are supplied by the manufacturer. Other items may cause serious damage to the gear.

### **Step 10: Move it carefully.**

Let’s face it, rowing shells and oars are big. Ranging in size from 30 to 60 feet, shells are downright difficult to move. Put them on the back of a bouncing trailer or on top of a car cruising down the interstate at 65 miles per hour and what was a difficult thing to move has turned into a dangerous thing—especially dangerous to the health of your shell. Each year more equipment is damaged in transit than in any other way.

Fred Leonard, one of the principals of Leonard, Cantrill and Clark, an insurance company in Philadelphia

(<http://emporium.turnpike.net/~coxing/insurance.html>) that specializes in shell insurance sees many claims annually for accidents. “A majority of the claims on shells happen in transport,” says Leonard. “Each year about 50% of the claims I get are for shell damage due to mishaps while the boat is in transit.”

While there is not much research on how often a shell is on the road, unless it was built at the boathouse where it is to be rowed it has to be transported at least once. And that means that it is at risk.

So how do you reduce the risk? Leonard has a couple of suggestions. “Regardless of whether the equipment is trailered or car-

topped, make sure it is strapped correctly, with good quality straps. If the strap is bad—replace it. And check the straps frequently, like every time you get gas.

“I also think that putting a line from the stern and bow to the car bumpers is a great idea when car-topping.”

Leonard also has one more suggestion: “Probably the most important thing in reducing the risk is to make sure the driver is knowledgeable about driving a trailer or a car with shells attached.”

### **Step 11: Store it well.**

And that brings us to the last area of discussion—storage. How you store your equipment, whether overnight or for several months can have a big impact on your equipment’s life span. Many a piece of rowing equipment has been damaged by fire, ultraviolet light, heat, being blown off of racks, or having tons of other stuff stacked on top of it. When storing a boat, common sense is critical.

Boats fall off racks more often than people would think. Fred Leonard says, “Falling or being blown off racks is a major cause of damage to shells.”

So as a concerned equipment owner what should you do? First,

rest the boat on balanced racks. Next, see that the boat is protected from the elements, especially the sun. Finally, if it is stored outside, even for two minutes, make sure it is tied down. These steps will greatly extend your boat’s life.

For oars, if you don’t store them in direct sunlight, in wet areas, and without anything placed on top of them, such as 100-pound weights, you should be fine.

The same goes for storing your electronics. However, realize that they should also be placed in a safe, dry area, since most are worth a lot of money. You should also be cautious about leaving rechargeable electronics charging unused for three days or more.

For more details about storing and moving rowing equipment please refer to the Tenth Anniversary Edition of *The Nuts and Bolts Guide to Rigging*. (Available with free shipping at [www.maxrigging.com](http://www.maxrigging.com).)

### **Step 12: Avoid Extremes.**

This may sound very simple in concept, but many people really don’t realize that rowing equipment is not indestructible. Yup, it bends, melts, and breaks. And usually that happens when an extreme force is applied to the equipment.

The extremes usually come in three flavors, temperature, weight, and friction. Although temperature is usually not too much of a problem nowadays it sure used to be. Oars were known to warp and boats to melt when exposed to extreme heat, and outboard motors to suffer great damage when exposed to freezing temperatures.

However, today crashes, weight and friction are probably the three leading causes of premature wear, and all three need to be avoided as much as possible.

It comes down to this, rowing equipment can take a pretty good dose of abuse, but when the normal range is exceeded bad things happen.

For example, riggers are strong, but when slammed into a boat-house door or a large, metal buoy, they tend to give. And oars are tough, but they hate to have things stored on top of them, especially 100 pound barbells. And seat tracks can last forever, but when dirt and sand get in them, and a seat grinds that grit into the track, they quickly can become useless.

To find out exactly what the extremes are, talk to the manufacturer, or read the operating manual thoroughly. And, of course, use your common sense.

### **Step 13: Insure it.**

I'm going to be pretty straightforward about this . . . you've got to have insurance if you're going to be involved in rowing.

Since a multitude of problems happen in storage and transit, insurance is an excellent backup system if things do go wrong. If you skip this step, chances are great that sooner or later (probably sooner), you're going to deeply regret not having the proper coverage.

I don't have the space or the expertise to go into detail here, but proper insurance is critical. Call your own insurance agent, tell him or her what you are planning on doing, and ask what the recommendation for coverage is. Then contact the Leonard Insurance Group,

<http://emporium.turnpike.net/~crowing/insurance.html>,

and get a quote. Over the years, Fred Leonard has been insuring a large part of the rowing community and has been very helpful. Compare the quotes and the coverage, and go from there.

# A Review

So there you have it, thirteen steps to helping your equipment last almost forever.

In the end, how long your equipment does last depends on how well you care for it. Be a vigilant owner: keep your gear clean; be careful how you store, move and repair it; and you should be rewarded with a equipment that may well be involved in rowing longer than you are.

Here is a review of the Thirteen Steps:

- ❑ **Follow manufacturer's recommendations**
- ❑ **Instruct people on use**
- ❑ **Keep it clean**
- ❑ **Tighten fasteners**
- ❑ **Wax your hull**
- ❑ **Avoid wet sanding**
- ❑ **Polish the hull**
- ❑ **Fix it now!**
- ❑ **Watch the lubrication.**
- ❑ **Move it carefully**
- ❑ **Store it well**
- ❑ **Avoid Extremes**
- ❑ **Insure it**

On the next page is an Action Plan that you can implement to help you weave the Thirteen Steps into your daily rowing.

# **ACTION STEPS**

## **Daily**

### **Before Rowing**

- ✓ Check rigger fasteners
- ✓ Keep shoes (and dirt) out of boat
- ✓ Keep boat off of dock

### **After Rowing**

- ✓ Clean tracks
- ✓ Clean hull
- ✓ Clean oar locks and oar sleeves
- ✓ Do a quick check for any problems
- ✓ Open ports to promote drying

## **Bi-Weekly**

- ✓ Walk around boat looking for problems; record and fix them
- ✓ Tighten all rigger fasteners
- ✓ Check rigger adjustments
- ✓ Clean electronics with fresh water

## **Bi-Annually**

- ✓ Treat hull with rubbing compound
- ✓ Wax hull
- ✓ Pay insurance premium
- ✓ Lubricate ball bearing seats and touching unlike metals
- ✓ Apply silicone to the outside of CoxBox™ parts and Nyogel to the pins

Other rowing resources by SportWork:

*The Tenth Anniversary Edition Of Nuts And Bolts Guide To Rigging*

*Buy It Right!: Eight Steps To Buying The Rowing Equipment You Need At The Price You Can Afford*

*How To Absolutely Maximize Your Rigging Numbers: Getting The Most From The Numbers You Use For The Rigging Of Your Rowing Equipment*

With many more to come.

